# the absolute sound

THE JOURNAL OF HIGH-E

OCTOBER 2023

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## MBL 101 X-Treme MKII Loudspeaker

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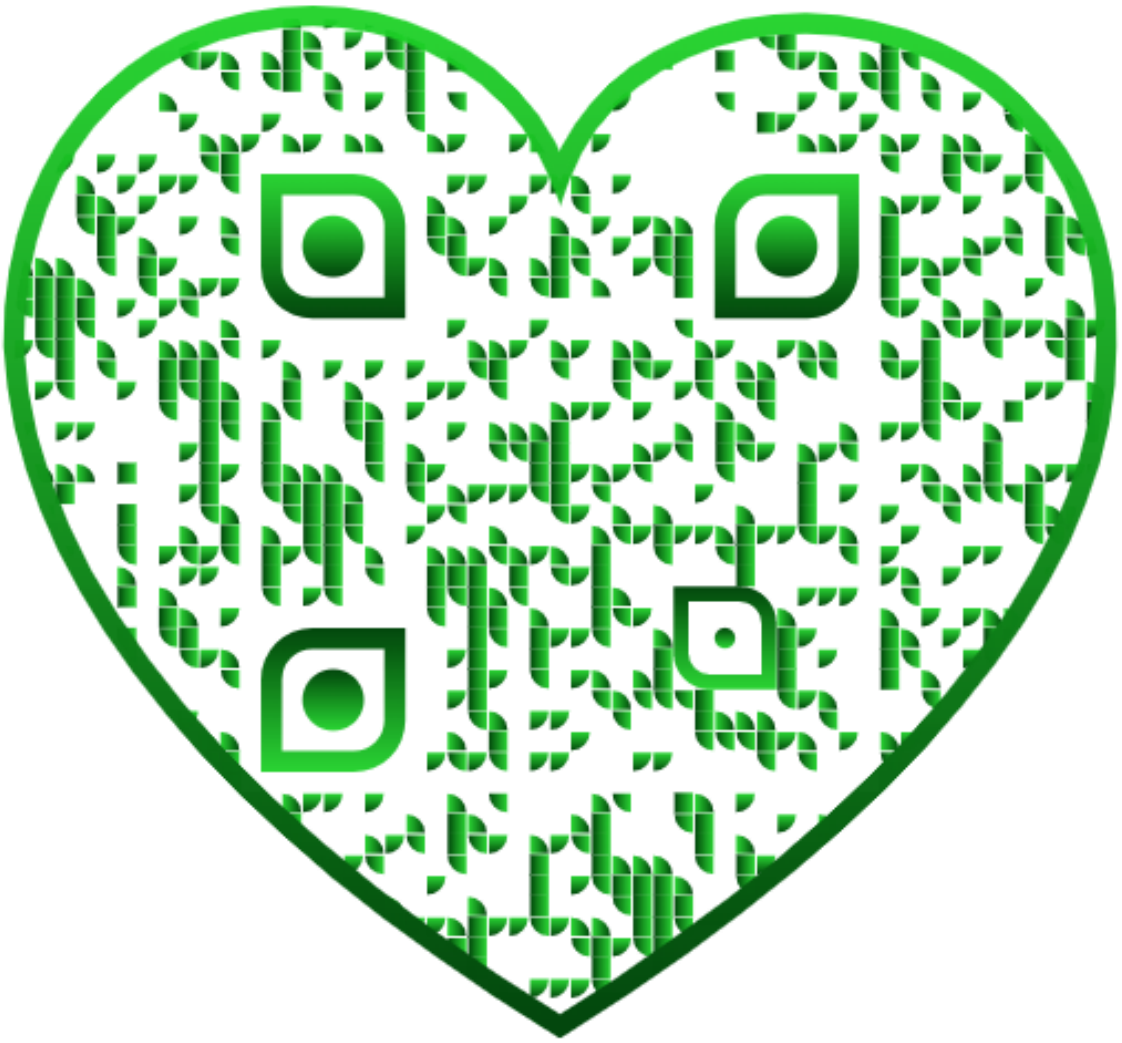

# An American in Germany?

**T66 and the author are from the US — but the speaker's performance and the comments about GoldenEar at the Munich High-End show are for all mankind:**

*"The big AudioQuest room with Rockport speakers was typically fantastic — AQ has a habit of putting their all into the entire system in their exhibit rooms so that you can hear everything that the cables are doing (or, more importantly, not doing).*

*But it was the smaller AudioQuest and GoldenEar room that really captured my attention thanks to a new and very slim pair of GoldenEar T66s."*

– Marc Phillips, Part-Time Audiophile

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**KEF R11 Meta Loudspeaker**

With an advanced new "Meta" material inside the cabinet, KEF wrings even more performance from its outstanding Uni-Q dual-concentric driver.

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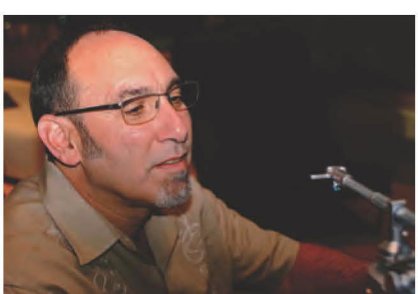

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# Letters

Email the Editor: rharley@nextscreen.com or: TAS, 2211 Denton Dr., Ste. J, Austin, Texas 78758

## Matching the Speaker to the Room

Although your speaker reviews normally specify the room placement used by the reviewer, very few state the dimensions and layout of the auditioning space or give any guidance on what type/size of room is required to accommodate them. Nevertheless, it seems evident that my home cannot accommodate most of these speakers. The big question is which ones I should investigate further.

I suspect many other readers would benefit from guidance on how to select an excellent speaker, given the physical and aesthetic parameters of a home. My problem is a one-story, 1400-square-foot home in which the listening space must be shared among a kitchen alcove, dining alcove, and living-room area. This places severe constraints on listening locations—essentially a sofa perhaps 8' from a relatively long front wall that hosts a fireplace, bookshelves, and a TV/electronics cabinet. Reading the fine print about "bookshelf" speakers, I find that most require a stand and considerable space from the front wall to sound good. There must be "studio monitors" out there that can actually sound good on a bookshelf, perhaps with the aid of a small subwoofer, but it seems nearly impossible to select an appropriate brand/model. Cost is not the main restriction here (saving rebuilding the house); space and configuration are.

Alan Taffel wrote an interesting, two-part article, "Building a Compact Reference System" (ending in Issue 316) that begins to confront such problems. The present letter was finally motivated by the leadoff statement in a review by Andrew Quint (Issue 328), "In fact, the first question [to a request for speaker recommendations] should be: 'Where will they go?'" Andrew goes on to describe the required spacing from the front wall for the speakers under review. I wish you would require this kind of discussion in all speaker reviews going forward.

Even more useful for a shopper like me would be a database somewhere (Buyer's Guide, Editor's Choice Awards?) that stratifies speakers, not according to physical type (floorstanding, bookshelf, etc.), but according to the environment they require to sound good.

I hope you will consider these suggestions for future issues.

**John Willett**

*RH replies: Thank you for your suggestion, Mr. Willett. We are always looking for ways to make our reviews more useful to readers, and this is an important consideration that we should address.*

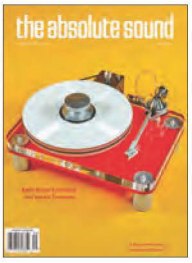
## Buyer's Guide Fan

Some time ago there was something that I looked forward to. It was the annual equipment directory from *Audio* magazine. I would look through this intensely for any new audio equipment that was unusual or might be taking audio in a new direction. Whenever I traveled, the first thing I would do upon arrival was check the phonebook, mainly forgotten now, to see if there were local audio stores that might be carrying high-end products. I would go there and check them out, moving straight for the newest and usually most expensive equipment. You used to be able to just walk in an audio store. I, of course, couldn't afford these products. But I used to be quite aggressive and would get them to play music on whatever caught my interest. I heard a lot of very rare equipment this way.

To me this equipment was beautiful. What more could you ask? Great looking, different, and you could listen to music with it. Pieces of art that you could touch and do something with. We seem to have moved in a direction I never imagined.

The other thing I looked forward to back then was the sometimes-long-awaited next issue of *The Absolute Sound*. What would the cover look like, and, of course, what would be discussed inside?

So, now the next issue of *The Absolute Sound* arrives, and it's an equipment directory, the *High-End Audio Buyers Guide*. I don't know if this is full circle or evolution. I still look forward to the next issue of *The Absolute Sound*. I guess things change and stay the same.




**Paul White**

## Ignoring Open Baffle Speakers

Why were there no open-baffle speakers listed in the annual directory [the *Ultimate Directory to High-End Loudspeakers and Cables*, Issue 340]? When will *The Absolute Sound* start publishing detailed reviews of open baffle speakers? Why has this type of design been ignored?

**Tony Roubound**

*RH replies: I assume you mean loudspeakers with dynamic drivers mounted on a flat baffle (with no enclosure around the baffle) rather than planar designs. We haven't consciously avoided open-baffle speakers. Rather, we simply haven't encountered any that are compelling enough to review.*

**UPCOMING IN TAS 343**

**The 2023 Buyer's Guide**

**Upcoming in Issue 344**

**Special Digital Focus**
- **Wadax Reference Server and DAC upgrades**
- **PS Audio PerfectWave DirectStream DAC Mk.2**
- **dCS Bartók Apex upgrade**
- **Audiopraise VanityPro multi-channel HDMI audio extractor**
- **Kalista DreamPlay X**

**TAS High-End Hall of Fame—three new inductees**
**Inisde the Danish Audio Industry**
**CH Precision P10 phonostage**
**T+A Solitaire S 540 loudspeaker**
**Monitor Audio Platinum 300 3G loudspeaker**

# We Rocked Munich!

*"I've never given an honorable mention to a cable company... This year is different. AudioQuest totally nailed it at High End Munich 2023. AQ cabling and power delivery, combined with the debut of the Rockport Orion speakers, was a magical combination…*

*This is what I came to the show to experience. Sound as pure as the driven snow, with spatial cues and texture, combined with an emotional performance and spectacular soundstage, captivated me."*

– Chris Connaker, Audiophile Style

*"With regard to the Munich show I must say, that one of the most natural but foremost realistic sounding rooms of the entire show was not from an equipment manufacturer, but from a cable manufacturer — AudioQuest! The system was sort of a blueprint, how close music reproduction can get to the original and how satisfying listening to recorded music can be."*

– Ingo Schulz, FIDELITY Magazine

AQ Dragon, Niagara 7000, CH Precision C1.2, Riviera Labs APL01SE & AFM100s, Rockport Orions system was curated by AudioQuest as part of an ongoing series of Munich presentations at which AQ proves how important *cable*, *power* and *careful curation* are toward creating a truly great audio system.

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Wilson Audio Alexia V

# ALEXIA V

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# From the Editor

# The Weak Link Fallacy

**We recently posted to *The Absolute Sound*'s** YouTube channel a pair of professionally produced videos describing my listening room and system. The first video takes you through the process of designing and building a dedicated listening room, with tips and techniques on how you can improve the acoustic performance of any room, not just those built from scratch. In the second video, I take you through all the products in my reference system, describing each one and why it earned a place in my system.

Not surprisingly, the videos generated many viewer comments, most of them positive. But one comment made me think about the relative value of a cutting-edge system when recordings vary so much in sound quality. The commentator expressed his belief that a high-end system such as my reference is wasted because the recordings played on it are not of commensurate quality. If so many recordings are flawed, he reasoned, why bother with a high-end system?

There's no question that high-quality recordings better show the system's capabilities and quality. In fact, I created a Roon playlist especially for visitors that consists of tracks carefully curated for their ability to demonstrate some aspect of the system. Each track exercises a different sonic characteristic so that, when heard in aggregate, a visiting manufacturer can quickly get an idea of what the system can do.

And yet, the necessity of superior-quality recordings to reveal certain aspects of a system's potential in no way diminishes the system's value when reproducing lesser recordings. Inferior recordings that don't fully exploit a system's full dynamic, timbral, and spatial capabilities are reproduced with far greater musical expression and listener involvement than if those recordings were reproduced by a lesser system. When my system is played in its usual capacity—for musical enjoyment, not sonic assessment—most of that time it is reproducing recordings that don't begin to tax its capabilities. Although there are a lot of great recordings out there, most of the music I enjoy is recorded with less-than-ideal fidelity. But that doesn't begin to deter me from playing them on the system.

When I make an upgrade to what is already a superlative system, even these compromised recordings are revealed to have additional expression and musicality. A good example of a great album that suffers from poor sound quality is Milt Jackson's *Sunflower* (with Freddie Hubbard, Herbie Hancock, Ron Carter, and Billy Cobham—-what's not to like about that lineup?). The piano is boxy, the drums indistinct, there's no top-octave air, and a murky pall overlays the music. Yet every upgrade I've made to my system over the years manages to reveal a greater sense of contemporaneous music-making and musical expression. The system's intrinsic quality isn't just about dynamic range, bass extension, transient speed, and other characteristics that contribute to an "impressive" sound. Rather, the quality is also expressed in countless other performance criteria we haven't even thought about isolating and describing. Removing artifacts in the playback chain, many of which we can't specifically identify, gives us a clearer and more honest look at the musical creation. I have CDs that I've listened to on just about every digital component I've reviewed over the past 34+ years and can say that every advance in digital playback hardware yields better sound and greater expression no matter how good or poor the recording quality.

> **"No matter how good or poor the recording quality is, improving a playback system inevitably yields greater musicality."**

The commentator's belief that a high-end system is wasted on poor recordings reflects the pervasive "weak link" fallacy, as in "a chain is only as strong as its weakest link." I experienced a vivid rebuttal of this idea in the mid-1990s when AudioQuest founder Bill Low visited to demonstrate for me nearly his entire line of cables…on a boombox to which he had attached terminations to make cable swapping fast and easy. We set up the boombox's removable plastic speakers on bar stools and listened to nearly every cable in his line. Even through this most compromised of playback systems imaginable, the sonic differences between his cables were readily apparent.

No matter how good or poor the recording quality is, improving a playback system inevitably yields greater musicality. The weak-link hypothesis may be true for chains, but not for audio systems.

**Robert Harley**

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# The Definitive Experience

## LS60 Wireless Lotus Edition

In a partnership between two iconic British brands sharing an obsession with creating the best experience, our collaboration has extended from in-car audio systems to KEF x Lotus products for the home. A state-of-the-art wireless high-fidelity speaker system, LS60 Wireless allows you to stream from any source and connect to any home audio devices with audiophile-grade power. Inspired by British Racing Green of the Lotus heritage, LS60 Wireless Lotus Edition brings the track spirit into your home in a harmony of design and innovation.

## Soulution 727 Preamplifier

**THE 727 PREAMPLIFIER** from Switzerland's Solution is the successor to the fabulous 725 that has won many of our top awards. The 725 isn't an update of that preamp, but rather a ground-up design that features an innovative input stage which increases common-mode rejection by 20dB, ensuring that no music signal details are lost at the inputs. As a result, the noise level of the volume control has been reduced significantly. On board are two volume controls—one is designed with high-precision metal-foil resistors for lowest noise levels, while the other uses PGAs for click-free volume adjustments. Thanks to its low distortion and ultra-broadband Class A output stage, the 727 preamplifier can drive even long interconnects to power amplifiers. Stable and quiet power supplies are keys for a reference preamplifier—the 727's required voltages are generated by a highly efficient switched-mode power supply and fast-switching DC/DC regulators, followed by ultra-low-noise local linear regulators. There are three XLR and two RCA inputs, as well as an optional phono input (mm/mc) with 40–80dB gain and adjustable impedance. **Price: $74,950 (phono module, $11,950). axissaudio.com**

## Wireworld Stratus™ and Electra™ Shielded Mini Power Conditioning Cords

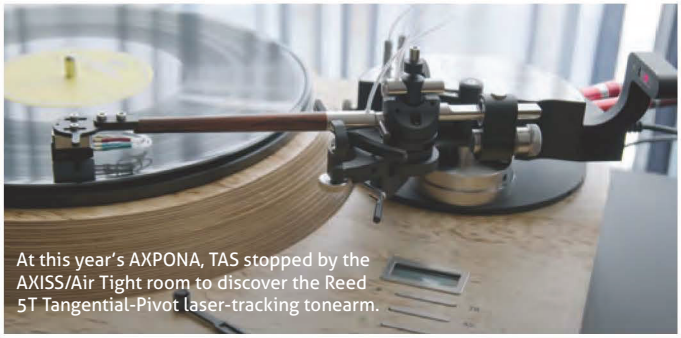
**FEATURING A NEW** conductor geometry that provides shielding and isolation from external interference, Wireworld's new "Power Conditioning Cords" extend the functions and benefits of power conditioning all the way to the component's power inlet. Stratus and Electra Shielded Mini Power Cords are flexible enough to use with small components like streamers, wireless speakers, and TV soundbars. Their individually insulated conductors add up to 16AWG per polarity. The conductor material in Stratus is oxygen-free copper, while Electra's conductors are made of the highest purity Ohno Continuous Cast (OCC-7N) copper. The figure-8 plugs and wall plugs feature highly conductive silver-clad contacts for measurably quieter connections. The filtering effect of the cords is enhanced by Wireworld's ultra-quiet COMPOSILEX insulation. The new conductor geometry is an extension of Wireworld's exclusive Tite-Shield™ technology, which reduces interference to improve image and sound quality.

**Price: Stratus Shielded Mini Power Cord: $70/1m, $80/1.5m, $90/2m; Electra Shielded Mini Power Cord: $160/1m, $200/1.5m, $240/2m. wireworldcable.com**

## Bowers & Wilkins 801 D4 Signature Loudspeaker

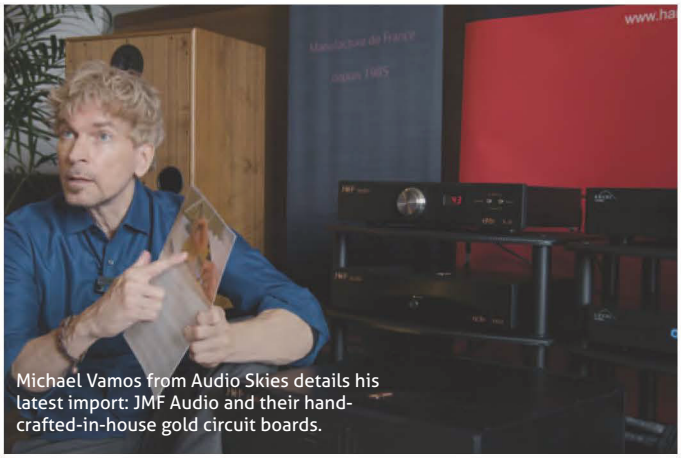
**THE 801 D4 SIGNATURE** is a three-way floorstanding loudspeaker that builds on the specification of the iconic 801 D4. The key is the upgrade of its twin 10" Aerofoil cone bass drivers with markedly improved magnets relative to the 801 D4 model. Also, a newly enhanced top plate beneath its Turbine Head midrange-enclosure uses an optimized skeletal structure and damping material to reduce resonance from the top of the enclosure. The port output is now cast from aluminum, creating a stiffer and quieter structure. The overall result is even cleaner, lower distortion, and more accurate-sounding bass. Finally, the 801 D4 Signature introduces a new FEA-optimized tweeter grille mesh, which provides a superior blend of transparency and stiffness. Available in two new finishes: Midnight Blue Metallic (finished with the same paint as B&W's iconic Nautilus) and California Burl, a highly figured wood finish. **Price: $50,000/pr. bowerswilkins.com**

# Video Preview



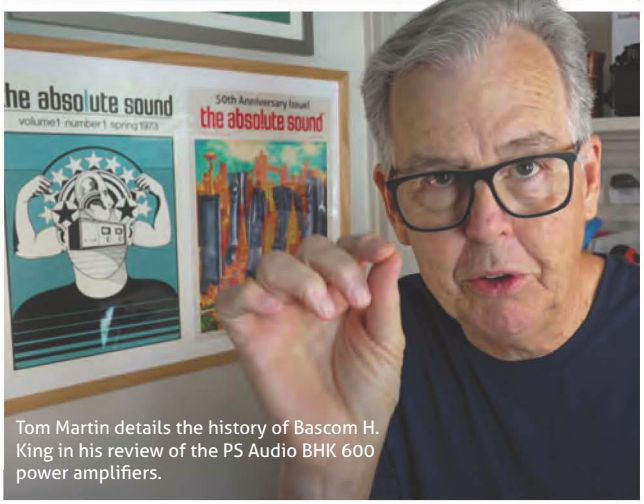
At this year's AXPONA, TAS stopped by the AXISS/Air Tight room to discover the Reed 5T Tangential-Pivot laser-tracking tonearm.

Tom Martin takes a guided tour through Safe and Sound, a long time high-end dealership outside of Boston, originally founded in 1983.



Michael Vamos from Audio Skies details his latest import: JMF Audio and their hand-crafted-in-house gold circuit boards.

Robert Harley takes us on a second tour of his listening room, this time focusing on the reference equipment he employs when reviewing.




Tom Martin details the history of Bascom H. King in his review of the PS Audio BHK 600 power amplifiers.

# *The Absolute Sound*'s YouTube Channel

Robert Harley

**If you're looking for more great high-end audio content,** check out *The Absolute Sound*'s new YouTube video channel. Our channel is chock-full of videos (more than 150 and counting) that cover everything from a nostalgic look at classic audio products to reviews of the latest components. We've got behind-the-scenes factory tours, show reports, audio-basics tutorials, and designer interviews.

We've also got product reviews, primarily of lower-to-mid-priced components that are stunning overachievers. New videos on our channel include an extended tour (in 4k video) of Michael Fremer's listening room. The newest video is an in-depth look at the design and construction of my listening room, including tips on how to improve your room's acoustics at minimal expense. A second companion video takes you through all the components in my reference system. We take you in the AXISS Audio room at AXPONA to discover the Reed 5T tangential-tracking tonearm. Tom Martin offers a guided tour of Safe and Sound, a high-end dealership founded in 1983. Tom also reflects on the rich legacy of designer Bascom King in his review of the PS Audio BHK 600 power amplifier. Michael Vamos of Audio Skies takes you through the technical details of his latest import, JMF Audio. That's just a sampling of lots of fresh new videos on our YouTube channel.

Video is an exciting way of delivering more and more varied content than we can provide in the magazine. We also hope to reach the next generation of music lovers who care about sound quality.

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FEATURE

# Transforming a TV Room Into a High-Performance Home Theater

Robert Harley

When I built a home five years ago, my focus was on the purpose-built listening room where I work and evaluate products for review in *The Absolute Sound*. I also allocated a small (16.5' x 11' x 9') room as a modest two-seat television room, building into the walls during construction the not-so-modest JL Audio IWSv2-SYS-213 in-wall subwoofers, four Atlantic Technology surround speakers, and two PSB ceiling speakers, the latter for Dolby Atmos reproduction. The heart of the system is an Anthem MRX-1120 AVR with a 12-year-old 65" Panasonic plasma as the video display. The front three speakers are PSB T3 left and right, and a PSB Imagine center-channel on a short stand in front of a low-boy equipment rack.

To give you an idea of my priorities, the TV room's power was distributed through a 25-year-old Monster Cable power strip I happened to have lying around and stock black AC cords. By contrast, the custom-built music-listening room was supplied with five dedicated 20A circuits and conditioned with top-of-the-line Shunyata Everest conditioner and Shunyata's best AC cords.

I hadn't intended on upgrading the TV room until I walked into Costco one day and saw the stunning picture quality of an LG 77" LCOS display. A new TV hadn't been on the agenda, but a few weeks after seeing that amazing picture I pulled the trigger on the LG. It's astonishing how good today's video displays are, particularly with 4k sources. The 12-year-old plasma served me well, but it was no match for the LCOS' picture quality and additional size.

**When I saw the improvement rendered by painting the room black, I resolved to transform the space into a high-quality theater.**

Some months later, a visiting manufacturer and I got to talking about video. He told me that he had the same LG display I had and that he greatly improved his viewing experience by covering the wall behind the TV with a black material that absorbed light. His comment inspired me to paint the entire TV room flat black. But that move set in motion a complete overhaul of the TV room. When I saw the improvement rendered by painting the room black, I resolved to transform the space into a high-quality theater. I already had the room, a great video display, surround speakers built into the walls, and the fabulous JL Audio in-wall subwoofers. All I needed was an upgrade to the AC power, better HDMI cables, and acoustic treatment. As

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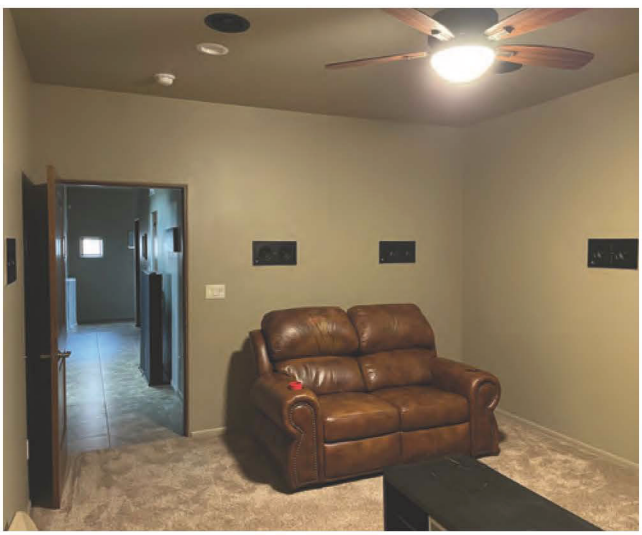

(Top) The room before upgrades. The JL Audio in-wall subwoofers can be seen on either side of the LG 77" video display.
(Middle) The back of the room showing the positions of the in-wall surround speakers and loveseat.
(Bottom) The left sidewall showing the placement of the Curve Diffusers and Fabric-Wrapped Panels.

much as I'm a believer in the value of acoustic treatments, my TV room was nothing but bare walls. The room clearly had a lot of unrealized potential.

I ended up with a surprisingly great-performing home theater, so I thought I'd share with you my thought processes, decisions, and products and describe the system's performance with the idea that some of you may want to turn a regular "TV room" into a truly outstanding home theater—even in a small space.

First, painting the room and ceiling flat black greatly increased the impression of the picture emerging from an infinite background rather than from a wall within a small room. Before the repaint, bright scenes illuminated the entire room, distracting me from the experience and pulling my attention away from the on-screen narrative. But I advise against painting the room flat black if the room is used for anything other than watching television—the room feels very oppressive when the TV is off. If the room is multipurpose, consider a compromise color that will reflect less light but not feel like a dungeon.

Next, I upgraded the AC power delivery to the components by replacing my old Monster Cable power strip and all the stock black AC cords with a specialty power conditioner and AC power cables. After researching various brands and lines, I chose an AudioQuest Niagara 3000 (which, coincidentally, is reviewed in this issue) and various levels of AudioQuest power cords (full list in the sidebar). AudioQuest makes such a wide range of conditioners and cables that you're likely to find just the right products that fit your budget and system. I was glad to learn that AudioQuest makes specialty AC cords terminated with the small two-pin and three-pin plugs for powering products such as the Control4 home-automation controller and Apple TV. Some of the components (4k disc player, Comcast cable box) have captive AC cords, leaving me with no upgrade option.

**The most extensive and labor-intensive upgrade was also the most important—adding acoustic treatments to the room's bare walls and ceiling.**

The next step was to replace all the HDMI cables with newer, high-performance products designed for 8k video and optimum picture quality and audio performance. Remember that the HDMI cable carries high-resolution uncompressed multichannel audio (with an appropriate source and program) along with wide-bandwidth digital video. It's a lot to ask of a cable. With 4k sources and the spectacular LG display, I didn't want to compromise their potential with marginal-quality HDMI cables. I again turned to AudioQuest for its wide range of HDMI cables and selected the ThunderBird 48, which is two steps below the top model.

The most extensive and labor-intensive upgrade was also the most important—adding acoustic treatments to the room's bare walls and ceiling. I went with a package

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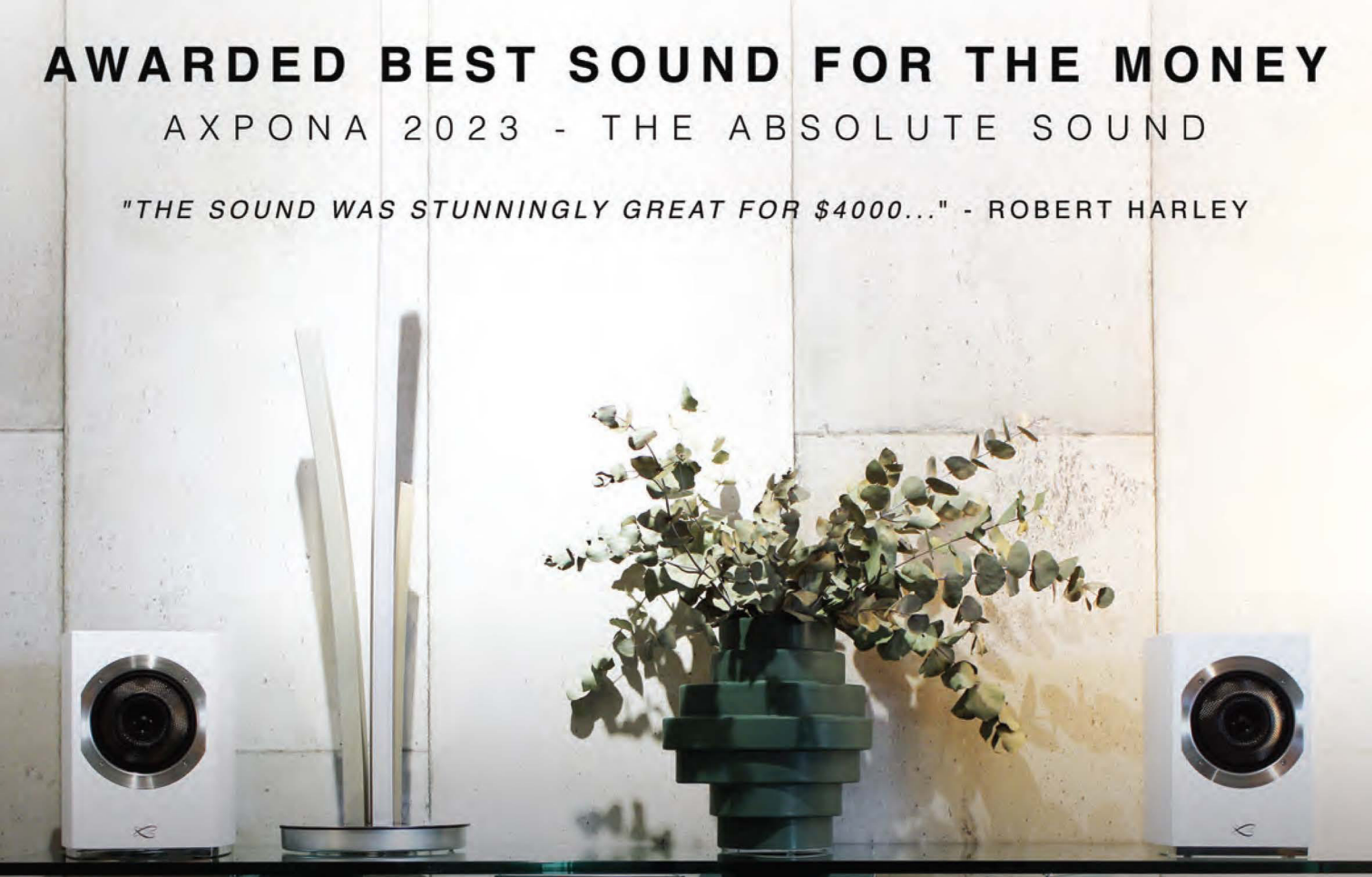

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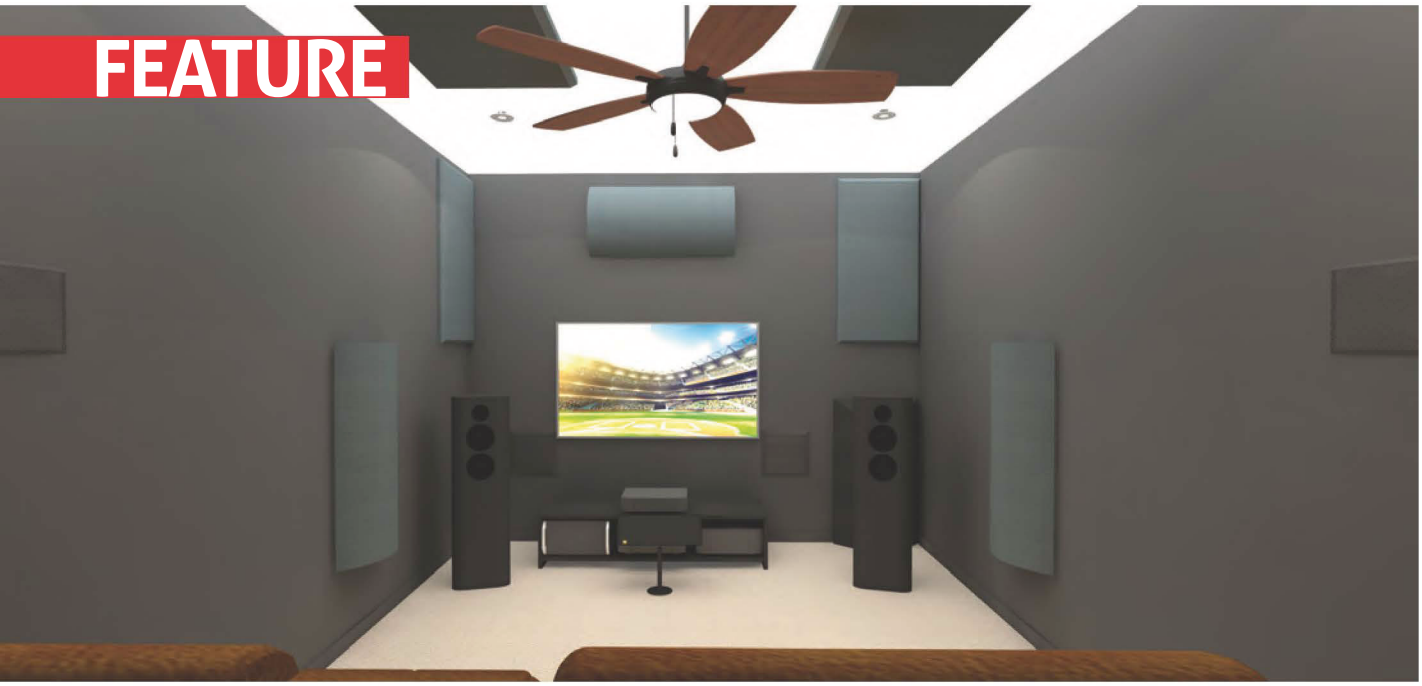

View from the listening position.

The AudioQuest Niagara 3000 AC power conditioner and AudioQuest power cords.

from Acoustic Geometry, whose products I use successfully in my listening room. I specified seven Medium Curve Diffusers, one pair of CornerSorber bass traps, and eight Fabric-Wrapped Panels (mid-treble absorbers). Fortunately, all these products are available in a wide range of colors, including flat, non-light-reflective black. You can see in the illustrations where each is deployed.

The most important treatment is positioning a pair of Curve Diffusers on the sidewalls at the first reflection points from the left and right speakers. I found these first reflection points by sitting in the listening seat and having a friend slide a small hand mirror along each sidewall in turn. The point along the wall where you can see the speaker reflected in the mirror (when seated in the listening seat) is the ideal position for the diffuser. That's because the point of visual reflection is also the point of acoustic reflection. There's no need to treat the entire wall surface, just the first-reflection point. A pair of diffusers (or absorbers) on the sidewalls at the first reflection point is the single most important thing you can do to improve the sound, whether in a two-channel music room or a multichannel theater. If the size, aesthetics, or cost of a Curve Diffuser ($449 each) is prohibitive, a pair of Fabric-Wrapped Panels (starting at $79 each) will also work. Although not as effective, hanging a rug on the sidewall is much better than a bare wall and its uncontrolled reflection.

Another pair of Curve Diffusers was positioned on the sidewalls directly to the sides of the loveseat. A fifth diffuser was placed on the wall behind the listening seat near the middle of the back wall. Two more diffusers, each positioned horizontally, were located above the TV and on the wall behind the listening seat above the vertically positioned diffuser, respectively. Note that the Curve Diffusers, in addition to diffusing sound and helping to break up standing waves, provide some midbass absorption. They have a rubber mem-

AudioQuest ThunderBird 48 HDMI cable.

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Acoustic Geometry Curve Diffusers are available in a variety of colors and finishes.

brane on the backside that, when placed near a boundary, absorbs midbass frequencies.

One CornerSorber bass trap was parked against the wall behind the right loudspeaker, with the second CornerSorber in the opposite corner. Bass traps are most effective in the corners behind the left and right speakers, but my room's layout precluded this placement. Note that CornerSorbers must be placed flush against a wall to be effective; the rubber membrane on their back sides must be next to a wall where the velocity of air is the lowest and the air pressure is the greatest. I've found from my experiments in a different untreated room that CornerSorbers are very effective in absorbing low bass. My music listening room has four CornerSorbers, two in each corner behind each speaker.

A pair of Acoustic Geometry CornerSorbers.

**After replacing the old power strip and stock black AC cords with the Niagara 3000 and AudioQuest power cords, I heard a significant improvement in virtually every aspect of the sound.**

Finally, four of the eight mid-treble absorbers (Fabric-Wrapped Panels) were affixed to the walls vertically in each corner near the ceiling so that each one faced an untreated section of the opposing wall. Each panel measures 2' x 4' and is about 2" thick. You can also mount a pair of Fabric-Wrapped Panels in each corner at the ceiling as I do in my music-listening room (eight units in total for the four corners) for greater mid-treble absorption. I hung four more Fabric-Wrapped Panels from the ceiling, with one each over the ceiling's first reflection point from the left and right speakers, respectively, with the other two directly over the listening position.

Acoustic Geometry's website features many helpful videos explaining these products and how best to deploy them.

The JL Audio in-wall subwoofers employ JL's very effective Digital Automatic Room Correction (DARO) technology that flattens the frequency response at the listening position. DARO is very powerful, creating and applying 18 custom-tailored filters to boost or cut certain frequencies to reduce the amplitude of bass peaks and to boost bass suckouts at the listening position. I've used DARO in quite a few applications and have found it to be amazingly effective in removing bass thickness and boom. After DARO, the bass is dramatically tighter, cleaner, better articulated, more dynamic, and punchier. In addition, the Anthem MXR 1120 AVR includes the equally impressive

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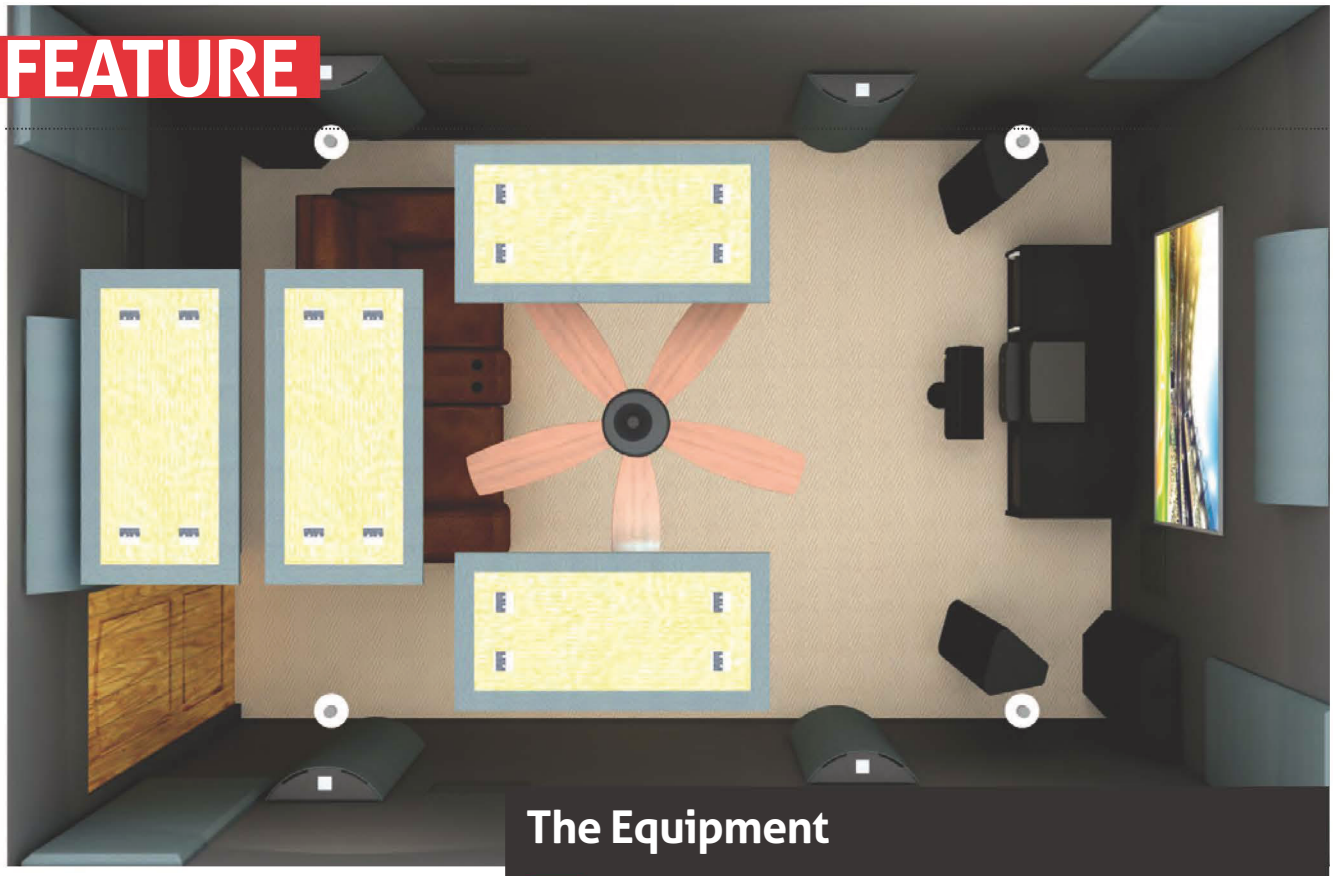

Overhead view showing placement of all the Acoustic Geometry products including the four ceiling-mounted Fabric-Wrapped Panels.

Anthem Room Correction (ARC) that also employs powerful DSP to reduce room- and speaker-induced peaks and dips.

Considering all this digital firepower on tap, why does a room need acoustic treatments, particularly the CornerSorber bass traps? Why not just let the DSP fix everything?

DSP room correction works by boosting the amplitude of bass suckouts and attenuating peaks as measured at the listening position. It measures the entire system response (speakers and room) and creates a series of filters with the inverse frequency response of the measured response. Then, when that filtered signal is modified by the speakers and room, the result is flat response at the listening position.

But this approach runs into the limitations of the loudspeaker and the amplifier powering it. Consider that if you have, say, a 12dB suckout at 42Hz at the listening position (caused by the room's resonant modes), the DSP will boost a band of frequencies centered at 42Hz. If a full 12dB of boost is applied to eliminate the suckout, the power amplifier must deliver four times the output power over that band of frequencies compared with no DSP, and the woofer must handle four times the power and be capable of the vastly greater driver ex-

## The Equipment

**FOR POWER CONDITIONING,** I chose the AudioQuest Niagara 3000. It is less expensive than the Niagara 5000 and 7000 and is the second-lowest-priced conditioner to include AudioQuest's Transient Power Correction that supplies the power amplifier and one other high-current device with a current reservoir. This feature, designed for current-hungry amplifiers, is available on two of its outlets. I plugged the Anthem AVR and JL Audio subwoofer amplifier into these outlets. The 3000 also has AQ's AC-Ground-Noise Dissipation for reducing noise on the power feeding your components. See Muse Kastanovich's review in this issue for a full evaluation of the Niagara 3000.

The 3000 doesn't ship with an AC cord; you must choose your own. For the crucial link between the 3000 and the wall outlet, I went with an AudioQuest Hurricane HC C19 AC cord. It is midway in AQ's top Storm Series (there are three series) and features AQ's 72V Dielectric Bias System (DBS). For the Anthem AVR and JL subwoofer amplifier, I went down to the cost-effective Wind Series and chose the Blizzard AC cables. To power the Apple TV and LG video, I picked AC cords from the NRG series, the most cost-effective line, specifically a pair of the NRG-Z2 C7 for the Apple TV streaming box and the LG video display, respectively. The NRG-X3 C5 powered the Control4 home-automation control unit. Although the least expensive series, the NRG line features AQ's Zero-Tech, Perfect-Surface Copper, Semi-Solid Concentric Conductors, and Direction-Controlled conductors and shields to drain noise from the signal. Even AudioQuest's least-expensive power cord is vastly better than stock AC cords. This package of AC conditioner and AC power cords seemed to offer the highest value by matching the AC cord to its application.

HDMI cables were various lengths of ThunderBird 48. This HDMI cable features solid conductors of polished long-grain copper that has been silver plated. The conductors' silver content is 10 percent. It also features graphene and carbon as part of the "Level 5" Direction-Controlled noise dissipation system. Finally, ThunderBird's ARC (Audio Return Channel) also features 10% silver conductors and drains.

The acoustics package consists of two Acoustic Geometry CornerSorbers, seven Medium Curve Diffusers, and eight Fabric-Wrapped Panels. I recommend two pairs of CornerSorbers, one pair in each corner behind the left and right speakers, respectively if your room can accommodate them.

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## PRICING

**AudioQuest Niagara 3000 AC power conditioner:** $3900.
**AudioQuest Hurricane HC AC power cord:** $1900 (1m)
**AudioQuest Blizzard AC power cords (x2):** $695 each (1m)
**AudioQuest NRG Z2 C7 (x2):** $199 each (1m)
**AudioQuest NRG X3 C5 AC power cord:** $79 (1m)
**AudioQuest Thunder-Bird 48 eARC Priority HDMI cable (3m):** $895
**AudioQuest Thunder-Bird 48 HDMI cable (0.75m, x3):** $795 each
**Acoustic Geometry Medium Curve Diffusers (x 7):** $449 each
**Acoustic Geometry CornerSorbers (x2):** $999 each
**Acoustic Geometry Fabric-Wrapped Panel (x8):** $79 each
**Paint and painting labor:** $648
**Total upgrade price:** $17,169

cursion required for a 12dB boost in acoustic output. This puts a tremendous strain on the amplifier and the woofer, mechanically, magnetically, and thermally. Moreover, with the amplifier and woofer operating at or near their maximum capability because of this boost, they have very little dynamic headroom available to reproduce dynamic peaks. It can also lead to amplifier overheating and shutdown, amplifier or woofer distortion, and woofer failure.

For these reasons, designers of DSP room-correction systems limit the amount of boost and cut so as not to overload amplifiers and woofers, the characteristics of which are sometimes unknown to them. (For DSP built into subwoofers, the DSP programmer can take into account the subwoofer's amplifier/driver limitations.) This approach protects amplifiers and woofers to some degree, but the boost still taxes the capabilities of amplifiers and woofers. Moreover, the amount of correction of a bass suckout is limited.

This is where acoustic treatment helps. By acoustically reducing frequency-response variations in the bass *before* the DSP system measures the complete system response (speakers and treated room), the DSP doesn't need to apply as much correction. Amplifiers and woofers are less stressed, and, consequently, the system has greater dynamic headroom to handle peaks.

In addition, DSP room correction, as powerful as it is, can't correct the many, many very-narrow-band peaks and dips of comb filtering at higher frequencies that occur when direct sound from the loudspeakers combines with reflected sound from a sidewall or ceiling. DSP also can't fix phenomena such as flutter echo (the "pinging" sound you hear when you clap your hands in an untreated room, caused by repeated reflections between two surfaces) or excessive reverberation time.

In short, DSP room correction in a theater system is a great boon (particularly in a small room that is likely to have compromised bass performance), but it's not a panacea. It works best when applied after the room is treated with a strategically chosen and positioned array of acoustic products and loudspeaker placement is made ideal. Together, correct loudspeaker placement, acoustic treatments, and DSP room correction are a powerful combination for realizing tight, articulate, well-defined, and non-boomy bass, particularly in a small room where the resonant modes are spaced far apart and thus more audible.

### Evaluating Performance

I performed each of these upgrades one at a time and evaluated their effects independently of the others. Later in this article, I'll prioritize the upgrades with the thought that many of you may want to improve your theater systems without the full overhaul that I went through.

After replacing the old power strip and stock black AC cords with the Niagara 3000 and AudioQuest power cords, I heard a significant improvement in virtually every aspect of the sound. The bass was better in every way—deeper, tighter, and much more dynamic. Kick-drum had greater impact and extension, and low-frequency effects in film soundtracks had more power and punch. The midrange and treble were cleaner—less hard and brittle. The Niagara 3000 and power cords reduced the glare in the upper midrange as well as a metallic sound in the treble. Overall, the sound was more relaxed and organic, with a great sense of ease.

The next upgrade was the HDMI cables. I had never compared and evaluated HDMI cables and had no idea what to expect to see and hear. I replaced all the HDMI cables at once, swapping a mishmash of generic cables, including a decades-old Monster Cable in the crucial link from the AVR to the video display, for AudioQuest's third-from-the-top model, ThunderBird 48. The long run from the AVR to the LG display was ThunderBird 48 eARC.

**I'll reiterate here my high praise for the JL Audio in-wall subwoofers. They are spectacular performers, and I don't consider the fact that they are in-walls a compromise in any way.**

The first track I auditioned with the new HDMI cables was the blues classic "Key to the Highway" from the recent Eric Clapton acoustic set *Lady in the Balcony* that I'd been using for other evaluations in the room—a track I knew well. The 4k Ultra disc has superb audio and video quality, and the live nature of the recording, coupled with the lack of isolation between instruments and the large reverberant room of the English country manor where it was recorded, make this a wonderful recording, both technically and aesthetically.

I should know by now not to be surprised by anything, but I was astonished to discover just how big an improvement the HDMI cables made. Here are just a few examples from "Key to the Highway," which were consistent with what I heard on a wide range of music. Clap-

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ton's voice leaks into all the other microphones, adding a wonderfully natural sense of air and realism that you simply don't hear on close-miked studio recordings. After swapping the HDMI cables, this air around his voice was much more pronounced and organic, with the newly revealed bloom seeming to open up and expand the soundstage, taking the presentation out of the speakers. This phenomenon also had the effect of making the small quarters of the theater room disappear to a greater extent, replacing the space with the acoustic of the recording venue.

There's a section of this track where the camera is on Clapton, but you can see drummer Steve Gadd in the background softly playing the snare with brushes. With the old HDMI cables, the sound of the brushes was barely audible; with the ThunderBird 48, the sound of brushes on snare drum was suddenly vivid, alive, and detailed. The new HDMI cables resolved a wealth of low-level detail that was simply missing with the lower-quality HDMI cables. Nathan East's acoustic bass took on greater clarity and definition, making it easier to hear pitches, and the starts and stops of each note were clarified rather than sounding indistinct and blurred. I could cite other examples, but you get the idea. I had no clue that HDMI cables could sound—or look—so different; the picture quality improved also, with more vivid colors, more apparent dynamic range, and a greater sense of three-dimensionality.

Adding the room acoustics was the final upgrade. At the end of a long day installing the Acoustic Geometry products, I took a break and came back to the room where I had assembled my repertoire of test material to evaluate the effect of adding the acoustic treatments. I had my usual and familiar array of CDs, music videos, concert performances, and films on 4k Ultra HD discs with uncompressed high-resolution multichannel soundtracks, thinking that I would need all of them to fully assess the effect of the acoustic treatment.

When I turned on the system it happened to be on the news channel I watch most evenings, with the newscaster's voice that I've heard for years through this system in the untreated room. As soon as I heard the voice, I knew that the acoustics made a massive improvement in sound quality. The newscaster's voice was suddenly missing something—a metallic hardness and brittleness through the upper-midrange. Now, his voice was smooth, natural, warmer, and more relaxed. I can't overstate the difference. I had not expected to hear such improvement on a single voice reproduced at a low level.

But it was with more challenging sources that really revealed the effect of the room acoustics.

## Priorities

**NOT ALL READERS** will want to invest as much time, effort, and money as I did, so I've listed below the steps I would take in order of priority and value.

- Optimize loudspeaker placement; this no cost tweak can yield a surprisingly big sonic improvement. All the other upgrades should be built on a foundation of good loudspeaker placement.
- Paint the wall behind the TV a dark color if painting the entire room is out of the question. If used only for TV watching, consider painting the entire room.
- Position a pair of Curve Diffusers or Fabric-Wrapped Panels on the sidewalls at the first-reflection points.
- Add a power conditioner and replace stock AC cables. AudioQuest makes the PowerQuest Series starting at $100, with AC power cords starting at $80. If your budget permits, the Niagara 3000 is an outstanding performer and ideally suited to a theater system.
- Add Fabric-Wrapped Panels to control mid- and high-frequency reflections.
- Upgrade the HDMI cables with the best models you can afford.
- Add more acoustic treatments as budget permits. Acoustic Geometry's website includes a video explaining the best order to add treatments and where to place them.

**The cumulative result of all these upgrades was a wholesale improvement in sound quality in every possible criterion.**

The lack of glare in the upper midrange did wonders for every type of music and film soundtrack. Diana Krall's piano on the Blu-ray Disc *Live in Paris* was warmer, richer, denser in texture, and devoid of the brittle character in the upper register. Her voice was smoother, fostering greater relaxation and involvement. The walking acoustic bass lines were better resolved in pitch and dynamics, revealing how tight this fabulous band is. But most of all, the acoustic treatments fundamentally changed the sense of energy and hard-driving swing this band displays when playing full-tilt. (Coincidentally, I happened to see Diana Krall live last weekend.)

Film soundtracks had a much more immersive quality, with the surround field seeming to expand in all dimensions with greater diffusion of ambient sounds but also more precise localization of sounds intentionally anchored in one of the surround channels. The soundtrack to *Blade Runner 2049* really revealed how the acoustic treatments transformed the small room into an apparently larger space.

### Putting it All Together

After I thought I had a firm impression of each of these upgrades individually, it was time to recalibrate the system and extract the highest performance possible. I fine-tuned the speaker placement, re-ran the calibration routines, tweaked the channel levels, slightly adjusted the subwoofer level, and set up the Apple TV 4k streaming box for the best performance.

The cumulative result of all these upgrades was a wholesale improvement in sound quality in every possible criterion. The most welcome improvement for me was the significantly more natural and realistic rendering of timbre. Before, the sound

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was overlaid with a hardness, metallic edge, brightness, glare, and an absence of top-octave definition. This character was pervasive across all sounds and contributed, once I heard it removed, a tension, listening fatigue, and limit on how loudly I could play the system. In their place was a timbral warmth and ease that alone would have been worth the expense and effort. The banishment of these artifacts allowed the natural timbre of voices and instruments to be revealed, contributing to a more lifelike and organic rendering. Clapton's voice and guitar on *Lady in the Balcony*, for example, were simply transformed by the upgrade, sounding simultaneously more vivid and present yet gentler and more relaxed.

Dialog intelligibility was greatly improved; vocals in musical performances and dialog in films were clearer and more distinct from the other sounds, making lyrics and words easier to understand. Voices were presented as separate entities rather than just other sounds congealed in a homogenized mix. Similarly, image placement was vastly better; what had seemed like one big continuous sound was revealed to be composed of individual instruments, each one separated by a sense of air and bloom. This was true for two-channel music as well as multichannel music and film soundtracks. The upgrade provided a greater illusion of the theater room's confines disappearing, replaced by a larger space—an illusion amplified by the room's black walls and ceiling being invisible.

The bass was also dramatically improved. Each of the individual upgrades, which I evaluated one at a time, contributed to the newfound bass performance. The Niagara 3000 and AudioQuest power cords provided better definition, dynamics, and clarity. The ThunderBird HDMI cables further enhanced the bass in similar ways. And then the addition of the Acoustic Geometry package took the bass performance to a previously unheard level. Before, the bass had been blurred and thick, lacking pitch articulation and resolution of dynamic expression. The upgrades transformed the bass, resulting in a real sense of individual notes, each with its own pitch, dynamic shading, and timbral nuance. I'll reiterate here my high praise for the JL Audio in-wall subwoofers. They are spectacular performers, and I don't consider the fact that they are in-walls a compromise in any way.

**Any small "TV room" can be transformed into a fabulous place to watch and listen to movies, music performances, and concert videos with outstanding picture and sound.**

Low-level detail was better resolved—e.g., the brushes on snare drum mentioned earlier. The sound was richer, denser, and more nuanced as a wealth of fine detail was revealed. Finally, the system's apparent dynamic range increased, with greater bass impact and more sudden dynamic contrasts both in the attack of notes and film effects as well as their more rapid decay. It was obvious that low frequencies decayed much more quickly, further adding to the impression of clarity and articulation. The extreme bottom end had greater punch and impact, along with greater suddenness of attack.

Hearing the system like this gave me a newfound admiration for the PSB T3 left and right speakers and Imagine center channel. All they needed was a clean drive signal and a better room to reveal their potential.

## Conclusion

My experience shows that you don't need a large space to create a first-rate home-theater system. Any small "TV room" can be transformed into a fabulous place to watch and listen to movies, music performances, and concert videos with outstanding picture and sound. I hope that my journey inspires and guides you toward realizing your own high-end theater. tas

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# Zanden Model 1200 Signature Vacuum Tube Phono Preamplifier

## Have It Smooth, Your Way

Andre Jennings

**Because Zanden Audio Systems Ltd. has been in** business for 43 years and counting, it's safe to say that Mr. Kazutoshi Yamada (Owner & Technical Director) knows a thing or two about designing and developing audio electronics using vacuum tubes. The product under evaluation here is the Zanden Model 1200 Signature Phono Preamplifier ($29,500) from the company's top-tier Classic series of products.

The 1200 Signature is a two chassis (separate power supply), all-tube phonostage featuring two moving-coil inputs (one low-impedance transformer-coupled and one high-impedance transformer-coupled) that has a fully balanced circuit throughout. Zanden is fastidious about noise reduction in its electronics and goes to great lengths to mitigate the effect of EMI/RFI, employing judicious amounts of noise-absorbing material in a substantial number of places, in addition to using what it calls electromagnetic wave absorbers attached to internal parts.

With a complement of six NOS JAN Sylvania 7308 dual-triode vacuum tubes inside the main chassis, the phonostage has an LCR-based equalizer that supports standard RIAA EQ along with four additional user-selectable Zanden EQ curve options (Teldec, EMI, Columbia, and Decca) and a "phase" (absolute polarity) switch to invert polarity. (Outside North America, the 7308 tubes are replaced with 6922s.) The 1200 Signature also includes a three-selection option for what Zanden calls the 4th time-constant feature. Zanden says this feature allows the user to select the out-of-band frequency-response time constant (centered around 42.5kHz, 45kHz, or 55kHz) based on the characteristics of the lathe that cut the lacquer, which is the starting point from which a vinyl record is made. These combinations of selections (15 EQ/time-constant settings plus two polarity choices) add up to 30 different configurations, covering a broad range of settings for your LP collection. Zanden believes these different EQ curves were used well after the industry standard RIAA EQ was adopted and are essential for getting the most pleasure from some LPs in our collections. I will briefly explore Zanden's EQ curve selections later in this report, but I believe the 1200 Signature should be evaluated on its merits as an RIAA phonostage first.

The 1200 Signature has a reflective, mirror-polished, stainless-steel cover on the main chassis. This main chassis is approximately 15.7" wide, 4.1" in height, and 13.9" deep. The Zanden name/logo and "Signature" model designation are in the center of the front panel. From left to right, there are four rotary-switch controls named "Power," "Phase," "Equalizer," and "MC-cartridge." The "Power" selection of "Standby" or "On," displayed by two labeled LEDs, indicate the unit's status. The "Phase" switch allows the user to select "Normal" or "Reverse" absolute polarity denoted by LEDs. The "Equalizer" switch selects between the five EQ curves and indicates the selected curve by a labeled LED. Each press of the "Equalizer" rotary switch will cycle between the three time-constant selections and the choice is specified at the "T/C" LED by a change in color. The final "MC-cartridge" switch on the far-right side of the front panel selects between the low-impedance and high-impedance moving-coil transformer-coupled inputs located on the rear of the 1200 Signature.

The rear panel of the phonostage has a set of balanced XLR transformer-coupled moving-coil inputs labeled "High MC Cartridge" and "Low MC Cartridge," with a ground terminal for the phono cables located between them (RCA inputs, in place of the XLR connectors, are an option). The next set of connectors on the rear are a pair of balanced XLR outputs and a pair of RCA outputs. Between these sets of outputs is a toggle switch to select which output is in use during operation. The final interface on the 1200 Signature's main chassis is the multi-pin "Power" connector used to link the power supply to the unit.

The 1200 Signature's external power has a reflective, mirror-polished, stainless-steel chassis that is approximately

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# Absolute Analog Zanden Model 1200 Signature Phono Preamplifier

## Specs & Pricing

**Type:** Tube phonostage
**Inputs:** MC high and MC low, XLR (RCA optional)
**Output:** XLR or RCA, switch selectable
**EQ curve positions:** RIAA, Teldec, EMI, Columbia, Decca
**Tube complement:** 6x 6922 (main),1x 6922 and 2x 6CA4 (power supply)
**RIAA gain (MC low):** 63dB @1kHZ
**RIAA gain (MC high):** 59dB @1kHZ
**Cartridge input impedance (MC low):** 35 ohms
**Cartridge input impedance (MC high):** 480 ohms
**Output impedance:** 250 ohms
**Dimensions main chassis:** 15.7" x 4.1" x 13.9" (398mm x 103mm x 354mm)
**Dimensions power supply:** 6.2" x 6.5" x 13.3" (157mm x 165mm x 337mm)
**Weight:** 19.8 lbs. (main chassis), 17.6 lbs (power supply)
**Price:** $29,500

**ZANDEN AUDIO NORTH AMERICA**
Contact: Eric Pheils
eric@zanden-usa.com
zanden-usa.com

**ZANDEN AUDIO SYSTEMS LTD.**
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Kishiwada-city
Osaka, Japan
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**Associated Equipment:**
**Analog tape:** Otari MTR-10 Studio Mastering (¼" 2-track) tape deck with custom Flux Magnetic Mastering Series repro head and secondary custom tube output stage, Studer A820 Studio Mastering (¼" 2-track) tape deck (x2), Studer A80VU MKII Studio Mastering (¼" 2-track) tape deck, ReVox A700 (¼" 2-track and ¼" 4-track heads) tape deck, Stellavox SP7 (¼" 2-track) tape deck with ABR large reel adapter, Nagra IV-S tape deck with custom large reel adapter, ReVox G-36 (¼" 4-track) tape deck
**Analog vinyl:** Basis Audio Debut Vacuum with Synchro-Wave Power Supply, Basis Audio 2800 Vacuum, TW Acustic Raven 2 'tables; Basis Audio SuperArm 9, Basis Audio Vector IV (x2), Graham Phantom III, Graham 2.2 tonearms; Lyra Atlas, Lyra Atlas SL, Lyra Etna, Lyra Etna SL, Lyra Titan-i, van den Hul Colibri XGP, Hana SL, Hana Umami Red, Hana Umami Blue, Ortofon Verismo cartridges
**Phonostage:** The Raptor (Custom), Ayre P-5xe, Musical Surroundings Phonomena II+ w/Linear Charging Power Supply, Zanden 1200 Signature Phonostage
**Digital source:** Intel i7 10th generation processor-based music server hosting JRiver Media Center, Roon, Qobuz, and Tidal. Currently researching reference DACs
**Preamp:** Dual Placette Audio Active Linestage
**Amp:** Custom/Modified solid-state Monoblocks
**Speaker:** Vandersteen Model 3a Signature with dual 2Wq subwoofers and dual SUB THREE subwoofers using M5-HPB high-pass filter, Focal Stella Utopia EM EVO
**Cables:** Assortment of AudioQuest, Shunyata, Tara Labs, Acoustic Research, Cardas, and custom cables
**Racks/Accessories:** Minus-K BM-1, Neuance shelf, Maple wood shelf, Symposium Ultra, Aurios Pro, Pneuance Audio, Walker Audio, Klaudio RCM, Kirmuss RCM, VPI RCM, Clearaudio Double Matrix Professional Sonic RCM
**Room:** 18' (W), 8' (H), 43' (L)

6.2" wide, 6.5" in height, and 13.3" deep. The front panel of this three-tubed (one 6922 and two 6CA4) unit contains the Zanden name/logo and a single green LED (that is illuminated when the supply is turned on). On the rear, there is an AC input connector (IEC), fuse holder, ground terminal, main AC power switch, and multi-pin power output connector that uses a custom interface cable to link to the main chassis of the 1200 Signature.

### Setup and Sound

I evaluated the 1200 Signature with two turntables (Basis Debut Vacuum and TW Acustic Raven 2), three tonearms (Basis Vector IV, Graham 2.2, and Graham Phantom III), and five cartridges (Lyra Titan-*i*, Lyra Etna, Lyra Atlas, Hana SL, and Hana Umami Red). There was enough variability in sources to get a reasonably firm handle on the phonostage's sonic characteristics when connected to different cartridges and supporting analog front ends.

In general, the Zanden 1200 Signature is a very smooth operator. The signal output of the phonostage never ventured into overt off-putting aggression with music playback. Vocals had that imaginatively human flesh-and-bones-type delivery, while instruments had flowing and inviting timbre more often than not. This same timbre of instruments, especially the first few harmonics, were very realistic sounding through this phonostage. When playing music with bite, the 1200 Signature delivered that same type of sound while, at the same time, remaining relaxed while doing so. Finally, above all else, this unit favors musicality over aggressive dynamics and hyper-detail.

### RIAA Listening

When playing an 80s pop tune like Simply Red's *Picture Book* (Elektra, 9 60452-1), the 1200 Signature produced a sound that was true to that time period's style with less aggression, which tended to give way to a more inviting flair. The singer's vocals appeared to have more tone color without popping as far out of the mix as much as they usually do. At the same time, his unique vocal peaking was still evident yet controlled. The sparse bass drum hit on "Sad Old Red" still packed a punch among the constant hi-hat and ride cymbals, with string bass, propelling the composition. Guitar licks, keyboards, and horns sounded as they should with the 1200 Signature in the playback chain.

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Staying in the late 80s, a recently produced RTI-sourced 45rpm test pressing of Clair Marlo's newly reissued *Let It Go* album (Brilliance Music & Studios, BMS-011-2) yielded similar results in terms of producing relaxed and inviting playback. On the bonus track "Meditation," the use of synthesizer to create a flowing and musically foggy soundscape from which the remaining instruments emerge was delightful. Marlo's vocal was overdubbed at times and nearly always dripping with studio processing to give it a reverb-enhanced sound. The 1200 Signature allowed the percussion and bass to progressively create the groove that moves the track steadily along.

Dexter Gordon's *One Flight Up* (Blue Note/Tone Poet reissue, ST-84176) allowed the 1200 Signature to shine from the first few notes of "Tanya." Starting with Art Taylor's drums, the cymbals were silky smooth and rich sounding while revealing both the initial strike and decay. Throughout the entire composition, you could continuously hear Taylor's artful drumming, including his delicate stick work during the featured-artist sessions, where Gordon or Donald Byrd would take off for minutes at a time showcasing their talents. Gordon's tenor sax (left of center) and Byrd's trumpet (right of center) sounded true to form with realistic transitions that easily progressed from soft pianissimos to fortes. With both, the sound never wavered from spot-on fundamentals and lower-harmonic richness. While much attention is rightfully given to both horns on this track, Kenny Drew's piano playing during his featured section proved to be equally compelling and enjoyable. Niels-Henning Ørsted Pedersen's double bass maintained steadfast timing throughout the session, as he patiently waited for a chance to display a smidge of his artistry during the final few minutes of the track, as the song continues to fade to its end. The 1200 Signature made this track a pleasure to listen to.

### Sampling the Curves

Zanden supplies a 16-page EQ-curve-list booklet with the 1200 Signature. This booklet identifies suggested settings by record label including EQ curve, 4th time-constant, and phase, with some remarks to further identify the record types within the label. It should be noted that Zanden mentions at the bottom of each page of the booklet that "you need to judge phase and EQ for exception by ear." I take this to mean that there can be some discrepancy with the suggested selections and, furthermore, to use your ears as a final arbiter when choosing whether to implement the suggestions, alter them, or default to RIAA playback.

Let's look at two red label UK mono London FFRR discs (Debussy *La Boite A Joujoux Printemps*, LL 1734; Ibert *Divertissement for Chamber Orchestra*/Chopin *Les Sylphides*, LL 884) and a mono U.S.-pressed Decca (Jesse Crawford *The Song Is You*, DL 8861) from the late 50s. According to the Zanden EQ selection booklet, the Decca setting along with reverse polarity and the mid-level (low for the Decca LP) time-constant were suggested. The sound from all three albums, using the suggested settings, lightened up the low bass and relaxed the energy into the presence range and upward. Because of this, the midrange was cleared to come to the forefront, thereby opening up much of the sound in that range while reducing bass percussion and low string tone as well as percussive shimmer. Depending on one's perspective, desire, and system configuration, I can see the selection of Zanden-suggested EQ curve or the standard RIAA EQ setting being a subjective preference for the user. While these are late 50s pressings, I note the Decca and one of the London albums mentioned above have "RIAA Curve" stamped on the printed jacket. In the case of all three LPs, there was a subjective preference for using the standard RIAA setting, due to that setting yielding more favorable lower bass and perceived energy in the presence range and above.

An original 1958 mono pressing of Nat King Cole's *The Very Thought of You* (Capitol Records, W-1084) was queued up and evaluated using two EQ curves. When first listened to with the RIAA setting, the sound was crisp with Nat's voice having a bit of breathiness and the string pizzicato sounding transient-rich. Switching to the suggested EQ curve (EMI) and 4th time-constant setting for this Capitol Records labeled gem was an interesting contrast. Most notably the presence range and above relaxed, while the lower midrange gained an ever-so-slight boost. The stringed instruments became perceptively a bit fuller, and Nat's voice dropped a bit of sibilance along with much of its breathiness. Cymbals moved a bit further into the background but stayed listenable. Subjectively, one could choose either setting by selecting a tradeoff of breathiness and transient pizzicato for perceptively fuller strings and less sibilance. These contrasts can be conceived as subtle to significant depending on one's preference.

Contrasting the original Nat King Cole album above, I played a modern stereo reissue of a different album titled *Love Is The Thing* (Acoustic Sounds/Capitol Records,

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SW824) to see how the suggested EQ curves fared. Given this LP is a modern pressing that was cut on a lathe with RIAA EQ from the reel-to-reel tape and pressed from newly produced 45rpm lacquers, there were some expectations as to how things would go. Bias (and facts) implies the RIAA curve is what should be used. Listening to the album yielded the same contrasting differences heard with the other Capitol Records LP using Zanden's suggested EQ curve settings. The strings gave up some shimmer for a fuller presentation, and the vocals became less breathy and less sibilant. However, one thing did change, the "phase" sounded best in the "normal" vs. "reversed" setting. This may be due to the modern signal chain in the studio having proper absolute polarity throughout. What this suggests is the EQ curve settings are consistent and repeatable in application regardless of the source.

## Wrapping Up

Use of the alternate EQ curves with vinyl albums recorded and/or produced well after the RIAA curve was established can strike up healthy debates among some in our hobby. Regardless of how I lean on the subject, the user should be aware of the following. I've mentioned Zanden communicates in the EQ-curve-list booklet that "you need to judge phase and EQ for exception by ear." This communication should be at the forefront of your thoughts when making a selection, especially as you become familiar with what the different EQ curve settings contribute to the overall sound. One should also be aware that making a shift in EQ curve setting from RIAA will not only change the EQ itself but also slightly change the output level (relative to 1kHz) by roughly a dB (nearly 2dB for Columbia); for direct comparative purposes, the alternate EQ curves have relatively higher output than RIAA EQ.

Additionally, the "Phase" (absolute polarity) adjustment, whether on the 1200 Signature or your preamp, should be subjectively used, because there could be reasons to reverse (no pun intended) Zanden's suggestion. One reason is that some stereo components invert polarity; others do not. Take note that many of the multi-driver loudspeakers with high-order crossovers may have one or more speaker drivers in the array polarity-inverted to achieve smoother frequency response. The result of these speaker-design choices can lead to phase rotation around the crossover point as well as opposite polarity for some vocal or instrumental harmonics that traverse the two drivers and crossover points. These situations can indicate the need for a subjective "Phase" (absolute polarity) selection when operating the phonostage or preamp. The issue of absolute polarity is generally applicable in all listening situations, regardless of music source, if one is audibly sensitive to this phenomenon.

## Conclusion

The Zanden 1200 Signature, with its meticulously crafted low-noise balanced circuit design and two different impedance MC transformer inputs, is a sonically engaging RIAA phonostage. If one prefers to go pure RIAA, there is more than enough performance in this unit to keep those who love its sound satisfied for many hours of listening pleasure. I can certainly envision users purchasing the Zanden 1200 Signature for this core RIAA operation alone. Add the available set of 15 eq/time-constant curve combinations and absolute polarity selection, and the icing is available to put on the cake, if one chooses to do so. For those with the desire to explore different EQ curve offerings, the 1200 Signature can prove to be a win-win scenario.

If you have the opportunity to audition the 1200 Signature, I'd suggest familiarizing yourself with the unit's core RIAA performance first. By doing so, you can better appreciate Zanden's meticulous craftmanship and execution of design principles. The additional EQ curve features can only increase the appeal for those who want to explore that part of this smooth-operating phonostage. tas

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# Magico A1 Loudspeaker

## Two-Ways for Time Travel

Andrew Quint

**It would be senseless for me to deny that I'm a fan** of Magico loudspeakers. I own six of them—M2s as my preferred stereo pair, a single S3 Mk2 for the center channel and S1 Mk2s as surrounds for multichannel applications, plus an S-Sub. But I'd had no at-home experience with Magico's entry-level A Series speakers and the opportunity to live for a couple of months with the company's smallest and least expensive model was of considerable interest.

The A1 is currently the only bookshelf/stand-mount in Magico's product line, but it's certainly not the manufacturer's first go at a small two-way loudspeaker. Progenitors include the Mini and the Mini II as well as the Q1 that Jonathan Valin reviewed favorably back in Issue 219. *[JV actually reviewed all three of these two-ways.—RH]* The new speaker builds on the Q1's strengths as, this time out, Magico founder/CEO Alon Wolf and CTO Yair Tammam had more advanced drivers and a novel crossover design to work with. They came up with a state-of-the-art monitor that, with stands, costs about half what the Q1 did back in 2012.

The speaker may be diminutive in appearance— 8.5" (W) x 15.6"(H) x 12"(D)—but be sure to bend your knees if you decide to pick one up: Each weighs in at 48 pounds. The enclosure, machined from 3/8"-thick 6061 T6 aircraft-grade aluminum, is responsible for the bulk of the mass, but the A1's substantial crossover components and the mid/woofer driver's motor system add to the heft, as well. As with every loudspeaker Magico makes, the cabinet is sealed; an internal bracing system plus carefully considered damping materials assure a resonance-free environment for the two transducers. Magico doesn't make dedicated stands for the A1s, one reason being the cost of shipping such heavy accessories. Wolf maintains that there are "many good stand options available for the consumer," and for the review he supplied a pair of massive 25" Sound Anchors, which weighed more than the speakers themselves. For those deploying A1s on a piece of furniture, there are cradles available that will angle the speaker up by five degrees; grilles can be purchased at additional cost.

The A1's 28-mm beryllium tweeter, developed in-house, is the same device used for the A3 floorstander. It employs design principles worked out for Magico's flagship M Series products. The 6.5" mid/bass driver has been newly created for the A1. A layer of XG nanographene is bonded to a carbon-fiber cone; both the driver frame and the membrane itself have been engineered with the goal of providing an optimal combination of stiffness and damping. A robust magnet array produces a stable magnetic field to interact with an audio signal applied to the all-titanium voice coil.

Magico's unique Elliptical Symmetry Crossover is characterized by a very steep roll-off outside the passband. All the electronic parts in the crossover are sourced from Mundorf, including some very expensive capacitors featuring "induction-free windings"—two windings are interleaved so that the inductance of each is canceled out. Like all Magicos, save for the behemoth M9 that requires biamplification, there's just one pair of binding posts around back. Wolf is firm as to why: "Massive R&D is invested in Magico crossover design," he told me. "Our crossovers are optimized to work with single wiring only, which maximizes the performance of our Elliptical Symmetry Crossover networks." I learned long ago not to argue with Alon Wolf.

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**Type:** Two-way, sealed-box enclosure
**Driver complement:** One 28mm beryllium dome tweeter, one 6½" Graphene Nano-Tec mid/bass
**Frequency response:** 35Hz–50kHz
**Impedance:** 4 ohms
**Sensitivity:** 84dB
**Dimensions:** 8.5" x 15.6" x 12"
**Weight:** 48 lbs.
**Price:** $9400 (brushed black finish) / $9800 (brushed aluminum finish)
**Grills:** $450/pair; 5°-angle cradles from $750 (set of four)

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Tidal Audio Ferios monoblocks, I used an Ångstrom Audiolab ZIA 100, a great-sounding tube/solid-state hybrid from Italy that outputs 100Wpc into 4 ohms (the A1's nominal impedance). In addition to providing a chance to hear the A1s with tubed amplification, this $10,000 integrated seemed an appropriate match from the standpoint of price for the $9400/$9800-per-pair Magicos. Digital sources—a Sony X1100ES disc player and a Baetis Reference 3 music computer managing local and streamed files—fed Tidal's Contros DAC/preamplifier. LPs were played on a Vertere MG-1/SG-1 turntable/arm combo fitted with an Acoustical Systems Archon cartridge. The phonostage was a Pass Labs XP-27 with signal routed via the analog bypass input of my trusty Anthem D2v directly to the power amps so as not to involve digitization. Analog cables were Siltech and Transparent; digital wires included products from Wireworld (AES/EBU) and Apogee Wyde Eye (SPDIF coaxial). In my high-ceilinged 225-square-foot room, the A1s ended up 9 feet apart, canted in towards the listening position, their rear surfaces 17 to 20 inches from the CD shelves behind them. The front baffle was roughly 9½ feet from the sweet spot.

The advantages of two-way loudspeakers over their three-way brethren are well-known—smaller size, lower cost (yes, the A1 is inexpensive by Magico standards), and the potential for simpler crossover implementations. On the other hand, two-way designs, it's said, can compromise midrange clarity compared to three-ways with a separate transducer dedicated to the 500–2000Hz part of the frequency range where vocals live, and bass reproduction necessarily suffers. Audiophiles know, of course, that talented designers with bigger budgets can completely undo these preconceived notions—just ask owners of Spica TC-50s or ProAc Tablettes back in the day or, currently, advocates for modern two-driver loudspeakers from Sonus faber, Wilson, Focal, Dynaudio, KEF, and many others. In fact, some of these latest examples can flip the script, offering a *coherency* to their sonic presentation that one usually associates with single-driver transducers.

**Its bass performance is exactly what it should be for a complete and unified representation of most full-range musical material.**

The Magico A1 is certainly one such speaker. Its top-to-bottom continuity is like nothing I've previously heard from a dynamic loudspeaker with multiple drivers. This is a function of several aspects of the A1's design, but the crossover topology surely plays a key role. When a singer covers a range that necessarily must be handled by both drivers, the representation of that voice is seamless. Similarly, when clarinetist Anthony McGill moves between the various registers of his instrument, one's impression is that sound emanates from a single hollow tube with an overtone structure that changes as the pitch rises and falls. This spectral cohesion, combined with a lack of audible coloration, heightens the realism of the most timbrally accurate recordings of vocalists and instrumentalists alike.

In the low end, the A1's uncompromisingly resonance-free cabinet and the design of the mid/bass driver itself are responsible for bass quality that's rare in a small loudspeaker, and the published LF specification of 35Hz seems quite believable. Now, if you listen to a lot of pipe organ music and require the very bottom octave of bass extension and the spatial cues that a real subwoofer (or a big bass driver in a three-way) can provide, if you thrive on the sort of electronica and dance music where low-frequency information below 30Hz actually exists and must be experienced at high levels, these speakers are not for you. But the A1s will provide satisfying orchestral weight in small to medium-sized rooms and with well-recorded pop, rock, and electric jazz, where most of the bass action is happening above 40Hz, you won't feel that much is missing.

Add a subwoofer? Be careful. I did, using Magico's S-Sub and, although the blending of the A1s with the sub wasn't the least bit heavy-handed (Magico's Yair Tammam did the integration remotely, using measurements from a Dayton Audio calibrated microphone set up at the prime listening position), and the goal of augmenting low-end weight and fullness was accomplished, I couldn't get away from a sense of there being something coming along for the ride that was apart from the rest of the frequency spectrum. I think this reflects the degree of top-to-bottom coherence that the A1 achieves on its own; its bass performance is *exactly* what it should be for a complete and unified representation of most full-range musical material.

Spaciousness and precise imaging are expected when small monitor loudspeakers are placed out in the room, away from the front and sidewalls, though the A1s, being

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# TIMELESS

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sealed boxes, do well in this regard even when positioned quite close to the room boundary behind them, without a loss of detail and soundstaging capability. A dimensional transparency is not hard to achieve when small musical forces are involved—classical chamber ensembles, jazz groups with four or five players, bluegrass bands—but the A1s manage the feat with large-scale symphonic music, too, something I usually associate with physically large loudspeakers. Listening to two favorite recordings of the Brahms Requiem (Shaw/Atlanta and Levine/Boston), the layering of orchestral sections and the positioning of the large chorus behind the instrumentalists was apparent with both versions. An important sonic difference between these two recordings is readily parsed by the A1s. For some reason—maybe the microphones used or their placement in relation to the singers, maybe the hall—sung sibilants quickly become distracting with the Boston recording (2008), while the old (1984) Telarc is exemplary in this regard—"s" sounds are naturally connected to the word they begin or end. The A1 is a truth-teller: If there's an aggressive HF sound on a recording, the A1s won't smooth over any harshness or brightness. And if a recording has expertly captured high-frequency information, such as Nils Lofgren's "Keith Don't Go"—an audio show favorite and deservedly so—you'll hear the guitarist's pristine harmonics distinguished fully from adjacent notes produced by a string vibrating for its entire length.

**The A1 is a truth-teller: If there's an aggressive HF sound on a recording, the A1s won't smooth over any harshness or brightness.**

Audio writers have a habit of "forgetting" about rave reviews of products they've written in the not-too-distant past, assessments that could be helpful to someone on the hunt for a particular component type at a given price point. After all (we tell ourselves) the most relevant comparator is live music—the absolute sound—right? Well, at least this time, I'll acknowledge a previous rave of a comparable product, Audiovector's R1 Arreté ($7100), reviewed in Issue 319 and the recipient of a 2021 Golden Ear award. My enthusiasm for the Danish two-way hasn't diminished in the least, but the A1 provides a compelling alternative. For many audiophiles (and I suspect, for most of their domestic partners), the Audiovector will be preferred aesthetically, especially on its smart-looking stand. The R1's AMT tweeter is pretty special, providing an extended, airy top end that's hard to beat with a dynamic driver. But the Magico's sealed-box enclosure allows for more flexibility in room placement, and its bass and dynamic capabilities surpass the R1's. Unless you listen mostly to acoustic jazz, smaller-scale classical, or pop/rock at moderate levels, you'll probably want to use a subwoofer with the Audiovectors; if the A1s were going to be my forever loudspeaker, I wouldn't. And then there's that remarkable coherency that should wear well, long after any angst about the purchasing decision has faded. With these smallest of Magicos, the likelihood of buyer's remorse is also small.

It's been said many times that, at its best, the audiophile endeavor can function as a kind of time travel, transporting a receptive listener to another place and era, where and when a recording was created—either a real-time performance or a creative synthesis, as with popular music genres. The longer I spent with the A1s, the more it occurred to me that these baby Magicos could serve admirably as nearfield monitors in a recording studio control room or mixing/mastering suite. They effortlessly reveal a wealth of musical detail; yet the "big picture" is always fully manifest. I spent hours listening to favorite pop/rock albums on vinyl from the analog era's last glorious decade circa 1970 to 1980—Dire Straits *Love Over Gold,* Bonnie Raitt *The Glow,* Little Feat *Dixie Chicken,* Steely Dan *Aja,* Joni Mitchell *Hejira,* Loggins and Messina *Sittin' In,* to name just a few—and the time travel effect was powerful. I experienced the essential character of these recordings—all different from one another—as determined in the studio by the original artists, engineers, and producers, and as I first heard them myself after eagerly tearing off the shrink wrap all those years ago. I was engaged with the music as intensely I'd been when it was new to me. Now, *that's* time travel. tas

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# Bowers & Wilkins 703 S3 Loudspeaker

## Refinement Realized

Drew Kalbach

**Bowers & Wilkins has been around for a long time.** My recitation of its history would be neither the first nor the most interesting to ever grace these pages, so I'll skip all that. But it is worth mentioning that the Bowers & Wilkins of today is *not* the B&W of 1966—and that's a good thing. In the stereo world, technology has been on a steady progressive march toward higher quality and greater accessibility. Sure, there might be some glorified heyday where every speaker sounded perfect and cost the same as a hamburger, but we all know we're better off now than we were back then. It's the same with B&W and, in particular, its new 703 S3 ($5999 per pair) floorstanding loudspeaker, which have benefitted from that steady march. This is the new third generation of the 700 Series, and the most affordable of the floorstanders in the 700 range that feature the tweeter on top of the cabinet.

It's hard to look at the 703 S3 and not instantly notice the torpedo sitting on the top. That's B&W's signature, decoupled, carbon-dome tweeter, a trickle-down improvement into the 703 S3 from B&W's top-of-the-line 702. This is that march of progress at work: Companies iterate and improve, and slowly those improvements make it down the product line until even the lowest-end equipment has features that only appeared in the upper-echelons a decade before. Aside from the tweeter, the 703 S3s are beautifully finished, with a slightly curved front baffle, a dedicated Continuum decoupled midrange cone, and two Aerofoil bass cones. My review pair came in glossy black, though the 703 S3 is also available in white and mocha. All this adds up to a very lovely, three-way, vented-box speaker with impeccable styling, standing at 44" tall (including tweeter and plinth) and weighing a solid 63.5 pounds each.

Tech-wise, it's hard not to talk about that lovely little tweeter housing. It's a piece of solid-milled aluminum with a swept-back shape meant to limit distortions. Placing it on top allows for the tweeter to remain decoupled from the drivers below, further limiting any interference. A newly developed mounting method increases the tweeter's decoupling. Beneath that, the Continuum midrange cone utilizes a new "Biomimetic Suspension" that replaces the traditional fabric spider, reducing the amount of sound reflected back to the cone, which reportedly results in a cleaner midrange. The Aerofoil bass cones have a variable thickness, which B&W claims provides stiffness and rigidity in important areas. Spec-wise, the 703 S3 has a nominal impedance of 8 ohms and a sensitivity of 90dB, which means it'll work with amps rated from 30Wpc to 200Wpc, according to B&W. From my own experience, I'd trend toward something on the middle to higher end of that scale, for reasons I'll get to shortly, but the 703 S3s would work well with a wide range of amplifier choices, depending on the listener's personal preferences.

To get it all started, I lugged the boxes into my above-garage office and sliced them open. After that, setup was a breeze. The 703 S3s are relatively large and heavy but not to the point that I couldn't handle them alone. They come packed with clear instructions printed on the box, which is always a bonus. After installing the base, I got them properly positioned, which was easier than expected and makes me believe they can be somewhat forgiving of room size and shape. For the next few days, I played a random

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**Frequency range:** 30Hz–33kHz
**Frequency response:** 46Hz–28kHz ±3dB
**Sensitivity:** 90dB SPL (2.83Vrms, 1m)
**Nominal impedance:** 8 ohms
**Weight:** 63.5 lbs. (each)
**Dimensions:** 7.6" x 44" x 12.4"
**Price:** $5999 per pair

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assortment of noise at absurd volume levels. This is called break-in. Sometimes, this process can be dull and repetitive, but for some reason I had a blast pushing the 703 S3s to their limits, feeding them just about whatever came to mind. Jazz, classical, punk, whatever. Early in my relationship with any new piece of gear, I like to get a feel for what they do best. I came away from my break-in phase with a sense that the 703 S3s do well with most genres, leaning toward big, energetic sounds. That's not to say they can't be laid back and relaxed when needed, but for me, they shone when pushed with complex multi-instrumental tracks.

Art Blakey's "Free For All," the title track of the album of the same name, is a frenetic, aggressive piece of jazz driven by Blakey's break-neck drumming. Throughout the piece, Blakey's going absolutely wild back there, slamming his sticks together, pounding his fills out like he wants to hurt the soloists, just absolutely losing his mind. It's great—he might as well be screaming his head off the whole time. Through the 703 S3s, this destructive drumming sounded fantastic, especially in the upper midrange and treble. Bass was solid—not good, not bad, but overall very tight and acceptable. I never wanted to drag in a subwoofer, which is saying something, though I can't pretend that it was the crispest, deepest bass I've ever heard. But it was that hi-hat, those cymbals, that snare which sounded fantastic. Sharp, distinct, driving. The upper midrange was the 703 S3's own little pocket of perfection, and songs that really lived in that space shone through. Beyond that, the soundstage was well distributed, each instrument in its distinct space, drums shoved to the right, second horn on the left, piano smack in the middle in the way those early Blue Note records are meant to sound. Pacing felt dead on, the cymbals never went bright and weird, and overall I was rocking out to some extremely aggressive jazz.

Next up, The Breeders. Their album *Last Splash* remains a masterpiece—just bangers all the way through. "Divine Hammer" is arguably the group's most famous song and sounded fantastic through the 703 S3s, especially the groaning, fuzzy guitars. They sat right in the 703's pocket, pushing into the upper midrange, making that tweeter add an extra bit of sparkle. Kim Deal's vocals, a little raspy, with just the right touch of rasp, were crisp and massive like she was standing in my listening room. I put on "Invisible Man" and fell into the waves of strumming and the big drums. Bass sounded bigger here, though it still never really blew me away, but that's actually fine—perfectly adequate is perfectly adequate. Overall, the upper-midrange to the top of the treble really worked well, whether because of that torpedo-tweeter or not, who knows, but human voices trending to the top of their range were keyed in.

Speaking of voices, I put on Nickel Creek's song "The Meadow" from its recent album *Celebrants*. I don't normally go for the new-age country bluegrass thing but, boy, was it a good choice. Nickel Creek also lived in the 703 S3's pocket, from fiddle to mandolin to singing, and the complexity of the layered voices and instruments pushed the speakers to really produce solid soundstages. In particular, the mandolin sounded amazing, and it helped that Chris Thile is a master. Throughout the track, the trio kept doing this de-tuning singing thing (there's got to be an actual term for it somewhere), and when they all sang in harmony-and-disharmony, the 703 S3s reproduced their positions beautifully along with that of the various instruments as the music built and ebbed. This was where the 703 S3s really stepped up to that next level, powering through and nailing those big sounds, giving a bit of shimmer to the top end, creating a crisp midrange, and keeping it all grounded with decent, never-flabby bass. I had a great time expanding my musical horizons. So, well done, B&W.

After that acoustic-and-voice music, I decided on a

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completely new direction. I loved Animal Collective back in college, but lost track of them over the years. Their song "Chores" from the album *Strawberry Jams* is a frenetic, shizo bit of synth, drum, guitar, and electronic screams held together with a solid, thumping beat. It's the sort of song that can get messy through low-quality speakers, but the 703 S3s kept the messy noises and voices in their proper places, structuring this layered, textured landscape into a cohesive shape. The 703 S3s sounded big, especially when pushed, and this track was no different—even the later, slower section, seemed to grow 10-feet-tall. When I hopped albums to *Merriweather Post Pavilion*, the song "My Girls" sounded like an electronic fairy garden in rave gear. The 703 S3's ability to create a sense of high-driving pace and rhythmic dynamics made this track feel as though it were exploding when the bass really pressed up against the speakers, like the sound wanted to smash through. It was very well done—the best the bass sounded so far, especially combined with that shouting vocal. But it was still that upper range which really glowed and kept everything together. Animal Collective loves density, and the 703 S3 did a good job of keeping everything from getting too mushy.

At this point, I was pretty impressed by how the 703 S3s sounded equally good playing Nickel Creek and Animal Collective, two bands with different approaches, but equally complex sounds. It felt like complexity was the through line. Songs with difficult landscapes almost begged for multiple plays through the 703 S3s. This is partially why I'd lean toward more power to feed that bass and to keep everything running nice and smooth. But it wasn't like the 703 S3s didn't work with quiet, simple songs. I listened to plenty of softer, small-group jazz ensembles through the 703 S3s and felt they all sounded great. It was just that, pushed to their limits, the 703 S3s came alive.

**Overall, the Bowers & Wilkins 703 S3s were solid performers that did the treble and upper-midrange exceptionally well.**

Overall, the Bowers & Wilkins 703 S3s were solid performers that did upper and upper-midrange exceptionally well, while nailing everything else. It was their versatility I felt that took the 703 S3s to the next level—they played pretty much every genre convincingly. Though at times the bass was somewhat less than perfect, it never overshadowed what the 703 S3s did exceedingly well, over and over again. I had a ton of fun throwing music at them just to see what stuck—and pretty much everything did. That's the mark of a real good pair of speakers. tas

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# Harbeth C7ES-3 XD and Monitor 40.3 XD Loudspeakers

## Extended Definition

Paul Seydor

**Generally speaking, when I begin to evaluate a** speaker system seriously—or any component, for that matter—I cue up some music, seat myself in the listening position, more or less upright, with ears at tweeter level, and leaning forward in a posture that suggests great concentration. This is how I began listening to Harbeth's Compact C7ES-3 XD, the latest version of the company's C7 model, which dates from 1994. Without quite realizing it, within at most, I'd say, a minute or so, I found myself easing back into a more relaxed position as a big smile appeared on my face. Man, this is one beautiful sounding speaker system—right out of the box, *sans* any of the usual warmup or break-in. Alan Shaw, owner of Harbeth Audio Ltd. and designer of its loudspeakers, has always claimed his speakers don't need that ritual, which proved substantially true here and with other Harbeths I've reviewed (they become a bit smoother over the first few days and a tad warmer, but after that the break-in is effectively complete).

Over the course of the first few weeks, the members of my usual listening group—fellow audiophiles and other music lovers, a few industry professionals (from both the recording and equipment sides of the business), some musicians—fell by, not to mention random guests curious about new audio gear I have for review. Each and all had almost exactly the same experience as I—within the first minute or so, postures relax and smiles appear on faces. Everyone commented right away on the high listenability of the C7-XDs. Those more experienced, knowledgeable, and sophisticated in audiophile terms, who listened longer or returned on other days with other source material, observed that this listenability is not at the expense of such usual desirable characteristics as detail, resolution, clarity, and transparency, nor did they find any shortage of involvement, definition, vitality, rich colors and textures, rhythmic drive, and dynamic range. Despite its compact size—approximately 20" x 10" x 12"—this speaker is capable of some seriously room-filling reproduction in my 21 x 15 x 8-foot listening room and also in my new office, a garage conversion commodious enough to accommodate a lovely listening area, which is where I first set them up.

Inasmuch as I reviewed the third version of the Compact 7, the C7ES-3, back in 2007, I won't pretend I remember what I wrote in any sort of detail or even what the speaker sounded like except in the most generalized sense, i.e., like a Harbeth. Nor have I heard the speaker again in the 16 years since I returned the review samples (although two friends purchased pairs on the basis of my review and continue to enjoy them with great pleasure). That being the case, I determined not to re-read my review right away, which allowed me to approach the new model without recent or firm recollections of the previous model.

This initial period extended into several weeks, rather longer than I had intended. They are so satisfying I gravitated more and more to the new listening room just for the sheer pleasure of how beautifully they reproduce music, and I soon found myself folding them into evaluations of other components in my reviewing queue. One afternoon I pulled one of my longstanding reference recordings off the shelf, the Bernstein recording of Bizet's *Carmen* (DG vinyl and CD), a source I use with every piece of equipment I review, planning to sample a selection here and there, beginning with the thrilling opening. Before I knew it, nearly three hours had sped by and I had listened start to finish through all six sides, all four acts, absolutely rivetted, something I hadn't done with this recording in I can't remember when.

Whenever I evaluate compact speakers like these Harbeths, I always play a lot of "big" music, from classical to

## Specs & Pricing

**Harbeth C7ES-3 XD**
**Driver complement:** 8" Harbeth RADIAL2™ bass/mid vented; 1" ferrofluid-cooled tweeter
**Frequency response:** 45Hz–20kHz, ±3dB free-space
**Impedance:** 6 ohms
**Sensitivity:** 86dB/2.83V/1m
**Recommended amplifier power:** 25Wpc minimum
**Dimensions (approx.):** 10.7" x 20.4" x 12"
**Weight:** 29 lbs.
**Price:** $4490/pair (cherry finish, other finishes available)

**Monitor 40.3 XD**
**Driver complement:** 12" bass (vented) RADIAL2™; 8" RADIAL2™; 1" ferrofluid-cooled tweeter
**Frequency response;** 35Hz–20kHz, ±3dB free-space, on-axis grille on
**Sensitivity:** 86dB/2.83V/1m axial
**Recommended amplifier power:** 35Wpc minimum
**Dimensions (approx.):** 17" x 29.5" x 15.27"
**Weight:** 82 lbs. each
**Price:** $18,990/pair (cherry, other finishes available)

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big band to hard-driving rock-and-roll, just to see how well they do. The Compact C7 XDs acquitted themselves excellently. They are capable of setting forth a wide and deep soundstage with very precise imaging and placement within the soundstage, including movement of performers if the recording happens to stage a drama or story, as the Bernstein *Carmen* or the Solti *Ring* cycle, another of my longstanding references, certainly does. From opera house to Broadway by way of a staged concert performance by the New York Philharmonic of Sondheim's *Sweeney Todd: The Demon Barber of Fleet Street* (CD, New York Philharmonic): I hadn't listened to this in years either and was swept off my feet by the energy, conviction, enthusiasm, virtuosity, and sheer adrenalin of this brilliant performance, a live recording that places you in ideal seat in the concert hall.

Lately I've taken quite a liking to Shostakovich's near-maniacal Fourth Symphony—the one that got him into so much trouble with Stalin—in the blazing and blazingly engineered version by Myung-Whun Chung and the Philadelphia Orchestra (DG CD). The opening, a shriek from the strings punctuated by cymbal clashes followed by tympani and augmented brass in a march that is both parody and scarily menacing, is here served up with playing and reproduction of amazing virtuosity and fidelity. Midway into the movement comes that furious fugato for strings, taken by Chung at an insane tempo that should be impossible to play with any sort of articulation, yet this storied string section brings it off like child's play. The dynamic range is awesome—the 80–100-piece orchestra typical of the late nineteenth/early twentieth centuries is for this piece increased to 140, with augmented brass and percussion—yet these compact Harbeths took it in stride, including even the crushing, pile-driving climax that follows the fugato.

Grand pianos can in their own way be as demanding as a full symphony orchestra. The first piano recording I played, within a day of setting up the C7 XDs, was Mitsuko Uchida's magnificent new Beethoven *Diabelli* Variations (Decca CD and Tidal MQA streaming), my candidate for the best new recording released these last few years of any work for piano. The Decca engineers found an ideal perspective: close enough for the piano to appear vibrantly present with exceptional clarity and definition yet with just enough ambience to keep the recording from being dry—indeed, the warmth, body, depth of tone, and apparent fidelity to the wealth of color, nuance, and character, the miracles of exquisite touch and phrasing for which this singular artist is renowned, are gloriously reproduced by these Harbeths. The venue is England's Snape Maltings Concert Hall, familiar from many of Uchida's other recordings (not to mention Benjamin Britten's). I've never been to this place, but the hall is famous for its combination of warmth and clarity, which is exactly how it sounds in this recording over these loudspeakers.

Voices? Well, superlative reproduction of voices is by now so solidly inside the Harbeth wheelhouse it seems unnecessary to remark upon it unless it happens to be absent, which is most emphatically not the case here. I recently lucked upon an original LP version of Hyperion's famous album of sequences and hymns by Hildegarde de Bingen, the twelfth-century abbess who was a mystic, a poet, a composer, and a visionary (eventually canonized as a saint): *A feather on the breath of God*, by the Gothic Voices. As recorded by Tony Faulkner, the singers should appear slightly set back from the plane of the speakers but palpably present. There are only eight singers. They sing solo, in duet, trio, or quartet, but never the whole group together. Thus, there should be no "depth" between or among the performers in the normal understanding of that word, and if they appear too distant, the response of your playback chain is somewhere recessed. But they are captured with an uncannily real-sounding dimensionality, roundedness, and purity, while the rich atmosphere of the venue, a London church, above, around, and extending well behind them should be very evident. Set the level right with the C7 XDs and you will hear what Peter Walker meant by his metaphor of "a window onto the concert hall" when trying to describe his goals when he was designing his QUAD ESLs.

During this period, I still wasn't evaluating the speakers as such for review, "merely" listening to them and enjoying them. But from a certain point of view this constituted the most valid "evaluation" of all. Isn't unfettered enjoyment of music, after all, what Aristotle would call the "final

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cause" of our pursuit of equipment to reproduce it in the home? One afternoon I wrote down my thoughts, the only notes I took during this period.

First, over most of its range the C7 XD is one of the most neutral transducers in my six decades as an audiophile, and unquestionably one of the most musically natural. Second, it boasts a coherence, transparency, and resolution not unworthy of comparison to my longstanding references: three generations of Quad ESLs, from the 57s to the 63s to the 2805s. Third, it exhibits a lack of coloration that again rivals my Quads. Fourth, to say that it is capable of a dynamic window that belies its compact size and its apparent simplicity is an understatement that borders on the risible. It was at this point, about two months after I had unboxed the speakers and begun listening to them, that I consulted my 2007 review. And it is at this point that I urge you to stop reading this review and read that one: Google "Seydor Compact 7," since much of what follows begins where it leaves off.

Setting aside Harbeth's P3ESR XD, which is a mini-monitor (aka, sub-compact), the Compact 7 is the entry-level Harbeth for those seeking a full-range loudspeaker, the principal limitations of which are reduced bass in the bottom octave (i.e., 20Hz–40Hz) and an inability to generate paint-peeling levels in large rooms. Its –3dB point is 46Hz. This is actually pretty low and more than enough to cover the range of most acoustic instruments; and it does not mean the speaker can't reproduce frequencies lower than that, merely that it does so at reduced amplitude and volume (more on this anon). In size and outward appearance unchanged since the mid-90s (see specifications for details), the driver complement remains the same: two-way 8" bass-reflex bass/midrange woofer, the high-frequency driver a SEAS 1" ferrofluid-cooled tweeter. Stand-mounting that situates the tweeter at ear level and positions the loudspeakers away from front and sidewalls remains the preferred way to get the best of what this remarkable speaker is capable (the importer Fidelis AV supplied TonTräger stands, highly recommended albeit pricey; an entirely worthy alternative at substantially lower cost is the dedicated stand from the Canadian manufacturer Skylan).

Like all Harbeths, the C7 XD presents a benign impedance load (nominally 6 ohms) and is not fussy about what you drive it with assuming the electronics are of good, i.e., audiophile or better quality (but you will certainly hear the quality of whatever you place in front of it). Its 86dB efficiency indicates medium sensitivity; 25Wpc of, again, good clean power is recommended at the minimum. I used several amps ranging from 40–180 watts per channel. At no point either in my main listening room in the house or in my garage-to-office new space (differently dimensioned from my main listening but, in fact, larger in volume), did I ever feel I had pushed the speaker to its upper loudness limits, even on powerfully recorded rock like Paul Simon's *Graceland* or the Rolling Stones' *Let It Bleed*. Quality of parts, engineering, fit and finish (beautiful wood veneers flawlessly pair-matched), and reliability are at a level that could be standard-setting for loudspeakers costing several times its $4590/pair retail.

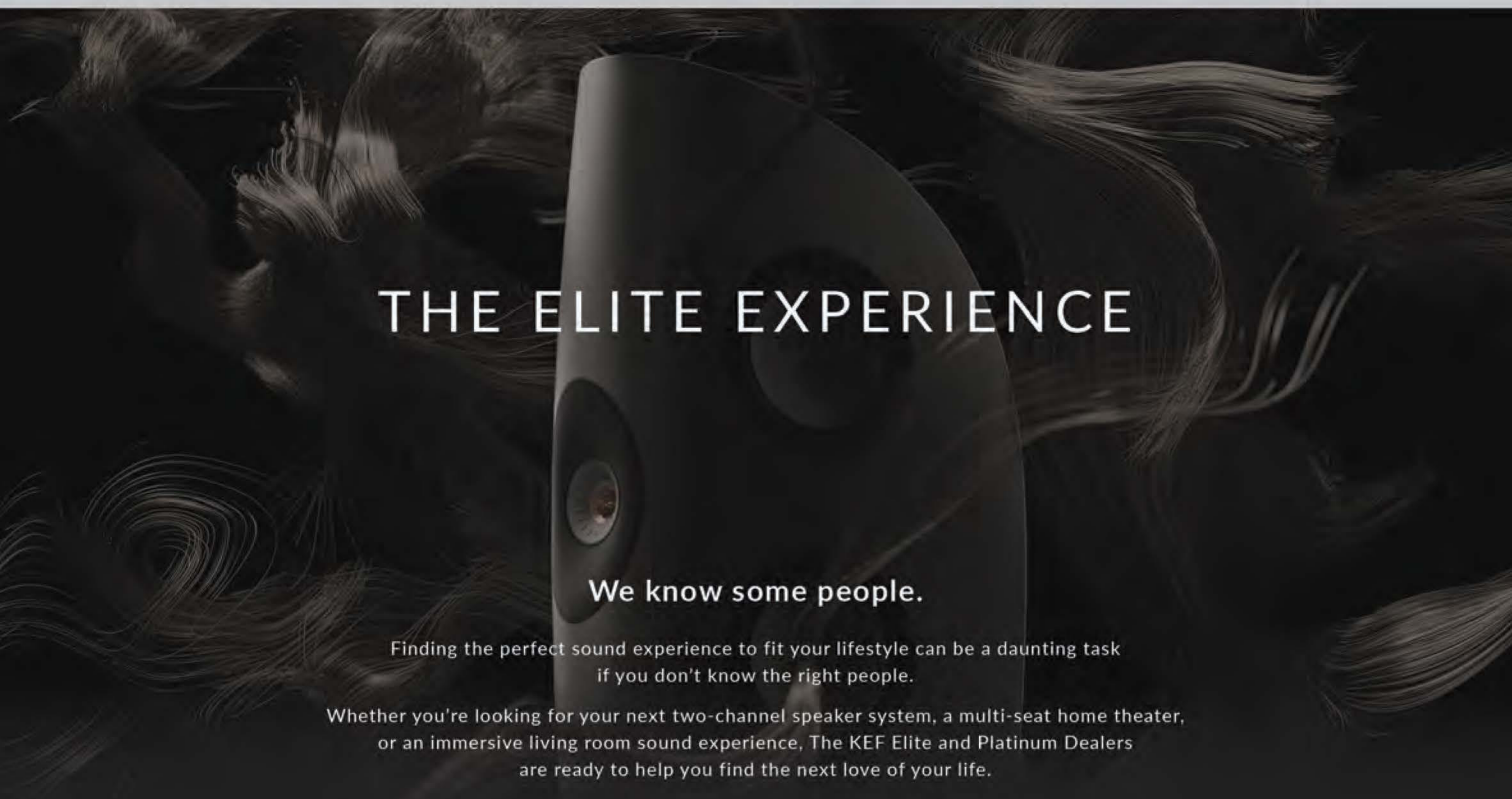
Turning back to that 2007 review, I no sooner got to the second paragraph than I read this: "Between about 80Hz and 10kHz there is nearly nothing wrong with the frequency response of the 7ES-3" and concluded: "Indeed, with respect to its class and design type—compact two-way in a box—this speaker sets, in my experience, a new benchmark in neutrality and natural tonal balance over its usable range, regardless of price." Bearing in mind that I no longer have easy access to the C7ES-3 itself, there's still nothing about those two statements that I would walk back as regards the XD version. And I have an advantage now that I did not back then, inasmuch as I can check some of my subjective reactions against in-room measurements using Dayton Audio's OmniMic V2 Acoustic Measurement System. From one meter on axis, I got one of the flattest, i.e., most linear, readings from the midrange through 10kHz since I started using this program a couple of years ago. Beyond 10kHz the response slopes toward 20kHz, which is really how it should be if a speaker is not to be too bright for a domestic setting, and which is what you get here and accounts for why the tonal balance is so natural with listening fatigue banished.

For what it may be worth, once I had read my review of the ES-3 version, I played all the recordings I discussed there over the XDs and soon found myself coming to the same conclusions about almost everything. For one example, as I pointed out about the C7ES-3, so too the new XD—it's actually slightly more accurate through the presence band than my QUAD ESL 2805. For another: how readily it takes tonal correction if you swing that way. A recording I did not have back then is Kei Koita's organ recital Bach: Organ Masterworks Vol. II (Claves CD). The friend, an organ enthusiast who introduced me to this superb recording, came by one day. We were both suitably impressed, as we should have been, by how loud and cleanly the XDs reproduced the Toccata and Fugue in D minor, and we both agreed that while the bass was very good, even in several respects quite excellent, especially in view of size of the midrange/bass driver, it was not in the same league as his Harbeth SHL5+ or my Monitor 40.3 XD, to say nothing of good subwoofers, nor did we expect it to be.

Then, just to see what would happen, I went over to my McIntosh C53 preamplifier, which is outfitted with an 8-band equalizer, and advanced both the 25Hz and 50Hz knobs to around 2pm. This immediately kicked the satisfaction co-efficient up a few notches (that, boys and girls, is just one reason why you really do want tone correction of some sort or other). No, it still wasn't what a larger woofer or a subwoofer would provide, but the bass was now satisfactorily substantial. Perhaps even more impressive was how in stride the speaker took the boost, without apparent strain. As you move up from deep- to mid- and upper-bass, the XDs become pretty amazing for the body, texture, and clarity of the presentation. Go the beginning of Liszt's Second *Hungarian* Rhapsody in the great Stokowski recording on RCA (SACD or vinyl) and be prepared to be amazed by the reach and strength of the double basses and trombones, not to mention the registral definition and clarity.

Finally, I hauled out a re-

KEF Listen and believe



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cently acquired vintage British Decca pressing of Zubin Mehta's *Also Sprach Zarathustra* with the Los Angeles Philharmonic. Back in the day, this was a frequent demonstration record because the 32-foot, low-C organ pedal point that opens the piece is actually *on* the LP. As well as the 7 XDs handled double basses on the Stokowski, it did come a cropper on *Zarathustra*. The pedal point was there and audible, but with nothing like the authority and sheer foundation of its larger sibling, the Monitor 40.3 XD. The same is true of the heartbeat on *Dark Side of the Moon*. That said, the C7 XD takes very well to subwoofers (I connected up my REL with superb results).

In the earlier review I remarked on how splendidly the C7ES-3 reproduced strings. One of the close friends with whom I listen from time to time is a top Los Angeles studio musician, a violinist. One afternoon when we were listening to a recording of a Beethoven string quartet, he said, "You know, one of the things I love about these speakers is that they really get the sound of a viola right, and that's not easy to do." Fairly well along during my evaluation of the C7 XD, I lucked onto a pristine vinyl copy of Les Musiciens' recording of Brahms' String Sextet No. 1, Op.18 (Harmonia Mundi, vinyl and CD). Words all but fail me when it comes to describing how beautiful both recording and performance are—sweet yet lushly, ardently romantic, with nothing "hi-fi" about it—and how truthfully the C7 XDs appeared to reproduce it. But as already noted, truth to the timbre of instruments and the character of voices is among the principal things this loudspeaker is all about.

Harbeth 40.3 XD.

Before wrapping up this portion of the review, I want to return to my opening note about the neutrality and naturalness of these speakers. As I've had occasion to observe elsewhere, these adjectives are interpreted by some audiophiles and audio critics as euphemisms for "unengaging," "uninvolving," "unemotional." I've just finished listening to Judy Garland's Capitol recording of "Over the Rainbow" on both vinyl (not vintage) and remastered CD (the latter is superior). This is the recording she made of her signature song in 1960 at the so-called "London Sessions." When she first sang and recorded it for *The Wizard of Oz* in 1939, she was 17 playing a Dorothy identified in the book as 12. The song is always at least a little sad because it's about yearning to return home and not knowing if you'll ever be able to, but at least back then and in that movie, there was a home beyond that rainbow to return to, and Garland knew the character she was playing would get back there. By the time of the London Sessions, after years of struggling with drugs and addiction, emotional and physical abuse, anxiety and other mental health issues, various ailments and illnesses, marriages (five) and relationships often marked by cruelty and ending in heartbreak, Garland had long since gotten to the other side of that rainbow where in life those skies were nowhere blue and the clouds, no longer far behind her, blocked both sun and hope. The emotions expressed in this powerful performance are not just sad but authentically tragic. By the time she gets to the closing question, "Why, oh why can't I?" the combination of despair in the voice against the crescendo in the orchestra is devastatingly ironic.

Unengaging? Uninvolving? Unemotional? Not bloody likely with these speakers! Inasmuch as I've not come remotely close to hearing all the obvious competition, I can't and wouldn't pronounce the C7ES-3 XD the best compact two-way out there, but given my priorities in what I want from music reproduced in the home, it is certainly the best with which I've had any sort of long experience or exposure. It's a really great loudspeaker.

### Harbeth Monitor 40.3 XD

I've given lead position and allotted more space to C7ES-3 XD here because it's the latest (and last) Harbeth to get XD treatment and so much time has elapsed since I reviewed its predecessor, whereas I reviewed the Monitor 40.2 in 2017 and the 40.2 Anniversary in 2019 (Google "Seydor Harbeth Monitor 40.2"). I urge readers to read those reviews, especially the one of the Anniversary, which was mostly a Monitor 40.2 cosmetically tricked out to celebrate Harbeth's 40 years in business. There I pointed out that the differences between the two versions on most music were so small as to be literally undetectable. I also observed that in both versions the 40.2 has to my ears a slight shelf-down beginning around 1kHz: "With those relatively

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rare recordings that aren't closely miked, the Monitor 40.2 can sound just a mite reticent, but never do they lose those elusive qualities of aliveness and sheer authority that help account for their extraordinarily high levels of satisfaction and the brand loyalty they inspire. They never glare, they're never fatiguing unless the source is, they're always natural sounding yet highly detailed without ever being nasty, harsh, or peaky. And so far as I can tell, they are incapable of contributing any offensive sonic characteristics or colorations of their own."

For the XD version, Shaw made a slight adjustment in the midrange-to-tweeter crossover that effectively eliminates this shelf-down by raising the tweeter level by 0.5–0.75dB relative to the midrange driver. This may not sound like much, and on complex signals, like most music, such a change in playback volume would be undetectable. But when applied across a broad frequency range, such as that covered by, say, a tweeter, it's a significant and readily observable difference. Fortunately, it is to my ears also an entirely salutary one. One member of a past listening group, who happens to have a particularly sharp ear when it comes to small variations in tonal balance, remarked of the 40.2 that it seemed to him a bit lacking in "vividness." I don't believe he would say the same of the XD version.

I'm also happy to report that the effect of this crossover change is not to make the speaker "bright" as such; rather, what the change does is simply eliminate the slight shelf-down. Again, my Omni-Mic measurements bear out the evidence of my senses: I got one of the flattest, smoothest most linear responses at one meter I've ever measured—almost textbook. Inasmuch as I had both the 40.2 and the 40.3 in house at the same time, I can assure Monitor 40 fans that Shaw has made no attempt to reinvent the wheel of what is obviously a very successful and highly regarded loudspeaker. The additional work he did on the crossover, however, does reap small benefits in transparency and coherence, "small" used not pejoratively, rather, that the earlier models were already at a high level of excellence in those areas. In other words, a truly great loudspeaker has been improved in some key areas.

But so much so that you have to sell your 40.2? Nobody reading this magazine for very long, I hope, needs to be told that such questions rarely admit of simple answers. If you really love the sound of your 40.2—and it is surely a reference to be loved—there is no guarantee you will like the slightly flatter response of the 40.3 better. It's hard to imagine you'll dislike it, simply that you might not like it *quite* so much. In my Anniversary review, I pointed out that the 40.2 is "a little midrangey"; the new balance of the 40.3 XD reduces that. Again, not hugely, because

there wasn't much of it to begin with, but still, it's subtly different. I personally went for the 40.3 XD because I like the change and had an eager buyer for my pair of the Anniversary, but trust me, had I not, I would still be listening to them without feeling in the least deprived.

Several friends of mine asked me if I would be comparing the 40.3 XD to the Graham Audio 5/5 that I reviewed so enthusiastically several months ago. The two speakers are, after all, direct competitors. I told them I would, but I'd be doing so with great reluctance. Why? Well, because words used for comparative purposes have a different and sometimes misleading weight, even meaning, from when they are used non-comparatively, and there's certain kind of mindset that will fixate upon the comparisons to the exclusion of any other consideration. The two loudspeakers in question offer a prime example of this. Both derive from their designers' training at the BBC, both employ some of the same methods and techniques, both are three-way reflex arrays, both use familiar voices as a primary reference, and both fall easily within the boundaries of what I call "acceptable neutrality": supremely natural reproducers of music with great authority and tonal fidelity to source material.

Compared to the 40.2 with its shelf-down, I found the 5/5 subjectively a little more accurate and judged it in that respect the best large three-way speaker in my experience. When the 40.3 XD came along, that statement lost its validity. This is because the 40.3 XD is equally but differently accurate. Perhaps a better way to put this is by referencing that old saw among speaker designers, to wit, when two speakers sound different, chances are they're both wrong. Which is another way of saying that no loudspeaker is perfect, none is ever not "wrong" in some way or other, however "right" it may be in other or most ways. For me, these are now the *two* best large three-way loudspeakers in my considerable experience with the breed.

There are two tonal areas where the Harbeth and the Graham diverge. First, the 40.3 XD begins its downward slope just beyond 10kHz, whereas the 5/5 continues on out well past 13kHz before it starts sloping. This is audible especially when listening to a lot of jazz and rock-and-roll, while on classical music it can sometimes make for a bit more air in the presentation. By no means, however, does it ever result in the Graham sounding excessively bright or, indeed, bright as such. Neither does the Harbeth sound in the least rolled off. To the extent that these characteristics are audible in either speaker, it's entirely in comparison. It's an irony that on the vast majority of overmiked recordings, the Harbeth actually sounds a bit more natural; the same is true if you're wedded to moving coils, most of which have rising top ends. On the

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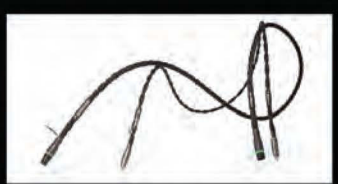
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other hand, if you're a detail fanatic, you might favor the Graham, though keep in mind that part of the rationale behind the XD modifications is higher resolution and detail retrieval, and I've never found any iteration of the Monitor 40 deficient in that regard.

As for the second tonal area, going back and forth between the two speakers, it sometimes struck me that the Graham sounds a bit lean next to the Harbeth, while the Harbeth sounds somewhat richer in texture and body next to the Graham. But having articulated this comparison, I want immediately to qualify it. Listening to each speaker on its own, nobody without cotton in his or her ears would ever describe the 5/5 as lean or lacking texture and color, while, as I've already indicated, the 40.3 XD has effectively shed virtually all the midrangey-ness as such, mild as it was, of its processor without losing any of its much-loved drop-dead gorgeous midrange.

The one area in which the Graham has a clear advantage over the 40.3 XD is horizontal dispersion. Owing to its slots over the woofer and the midrange drivers, the 5/5 maintains its top to bottom tonal balance over a 60-degree frontal window. By contrast, the 40.3 XD, like most speakers with drivers on a baffle in a box, has a much narrower window that mandates on-axis orientation for best and smoothest frequency response. The Graham's slots were designed precisely so that recording mixers could hear a top-to-bottom tonal balance while moving back and forth across a long mixing console where they will inevitably travel in and out of the dispersion window of most speakers lacking slots. If that doesn't apply to you or if you're not a peripatetic listener at home, this advantage may not mean much. Relative to which I should add that during the several months I used the Graham, I always oriented their frontal axis toward the listening position because they sound better that way. (I've never been a fan of facing loudspeakers straight ahead because it compromises imaging, coherence, and phase and frequency response.)

So, which one of these superb speakers *is* better? My colleague Robert Greene reviewed the two earliest versions of the Monitor 40, I reviewed the three most recent versions (and now own the XD), and I reviewed the Graham in considerable detail last year. Since there is surely enough in all that coverage to assist anyone in making up his or her mind short of actually auditioning the speakers, which you must do anyhow, I shall say no more on the matter of comparative recommendations. Instead, as I prepare my exit, allow me to remind you of what that reprobate Macheath says of his two inamoratas in *The Beggar's Opera*: "How happy could I be with either/Were t'other dear charmer away!"

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# XD Modifications, Measurements, and the BBC Heritage

Over the past three years Alan Shaw has completed a project of upgrading the entire line of Harbeth loudspeakers. Once upgraded, the moniker of each model is given the suffix "XD," which stands for "eXtended definition." Though XD modifications include numerous small changes in parts—inevitable with any long-lived products, as all Harbeth speakers are—the most substantial improvements consist in cone material and crossovers. The bass and midrange drivers for all Harbeths are made from RADIAL 2, the latest formulation of RADIAL™, Harbeth's proprietary compound, known for its lightness, rigidity, and extremely low coloration. "All Harbeths have also progressively focused on refining the integration of the bass/midrange driver and tweeter," Shaw told me in a Zoom interview. "Crossovers have been selectively upgraded and now more carefully integrate the drive units across a wider vertical arc for increased presence and transparency."This is consistent with what he said in my 2017 TAS interview: "Coherence is primarily a crossover issue. It doesn't take much of a mismatch in level or phase for the subconscious to needle the brain with awareness that there is something wrong."

But new and more accurate test and measuring equipment also plays a part in the XD changes: "More sophisticated audio analytical tools (both hardware and software) in the right hands—a subject in itself!—can be a sonic microscope into the performance of the speaker," Shaw said. "The core principle for me is, 'If I can definitely hear something I don't like, I can eventually decide by listening in which frequency band it resides; now I need to point my measurement equipment at that frequency band to see if I can find something in the measurement data that correlates with what I hear.' Sounds easy, rarely works out like that. Sometimes the issues are buried deep: they are not frequency issues; they are time issues that manifest themselves as frequency issues. Think clapping hands in a railway tunnel—you hear a fluttering pitch, but this is a psychoacoustic matter. There is no pitch to an impulsive noise. So, much of the use of such tools is to accept that if you hear something you must be able to measure it, but that often means you have to figure out what the apparent measurement is actually measuring."

The new equipment also allows for further refinement in the company's already outstanding unit-to-unit matching of parts, drivers, and final production units. One of Harbeth's suppliers told Shaw that only one other of its global clients measured the parts they supply as exactingly as Harbeth or with as high a rejection rate. The final voicing in the development of every Harbeth design is done in pairs "because a speaker both measures and responds differently to the human ear when reproducing music by itself from when it is part of a stereophonic pair." A complete record is kept and recorded as to drivers, crossovers, parts, and test results for each and every Harbeth loudspeaker that comes off the assembly line. Should a driver or other part be damaged or fail in the field, a replacement can be supplied so that the repair results in the speaker sounding exactly as it did before it was damaged or failed. (Product failures are rare: Shaw told me that "Monitor 40s in the BBC control room at The Ulster Hall in Belfast are still working perfectly after over 20 years of use.")

The British Broadcasting Corporation has been out of the speaker-designing business for a long, long time now. When Shaw purchased Harbeth from Dudley Harwood, both he and Harwood knew that manufacturing speakers designed principally for BBC studio monitoring was not a sustainable business model. For one thing, the market for loudspeakers with so specific an application is simply not large enough. For another, and more important, the conditions under which loudspeakers are used in domestic settings often vary considerably from those in small monitoring rooms and other studio applications (e.g., the rooms at the BBC studios are very heavily damped, so a speaker adjusted to perform well in such an environment will not necessarily perform optimally in most homes, which are far, far less damped, particularly if the décor is modern).

From the beginning of his ownership of the company, Shaw had his sights fixed firmly on the home market. The original HL Compact from 1987, from which the Compact 7 series evolved, was, in fact, the first Harbeth loudspeaker designed wholly apart from a BBC set of specifications as to size and other requirements. Some online sources report that Shaw considers the XD version of the Compact 7 the best speaker in the company's line. When I asked about this, he told me he never said that, but he does allow as how he has a special affection for the C7, not least because the first generation of the Compact 7 was the Harbeth that first used the RADIAL driver. Since then, every Harbeth model has RADIAL bass and midrange drivers for greater midband neutrality, higher transparency, and lower coloration.

Even though Shaw no longer allows himself to be limited to what he calls "the BBC orbit," his apprenticeship there and the corporation's half-century of research and development continue to stand him in good stead: exacting measurements, the thorough record keeping, thin-walled cabinets for optimal control of resonances, paramountly elimination of coloration by using known voices as a principal reference. "It's that respect for the second B in BBC: broadcasting, human-to-human speech," Shaw says. "It means that the core design philosophy in our corporate DNA can be summarized as: 'If the loudspeaker sounds credible and defect-free on human voice, it's a greenlight to invest time and energy in seeing how it reproduces music.' Any loudspeaker designer that does not have that embossed in his soul like a stick of Brighton rock will be blown this way and that by musical fads to his ultimate peril." tas

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# KEF R11 Meta Loudspeaker

## Trickle–Down Triumph

Andrew Quint

**The term "trickle-down" first saw wide usage in the** 1980s in the context of supply-side economics. The idea was that the advantages realized by wealthy people and corporations from Reagan Era tax cuts would eventually make their way to individuals of modest means. It has since been employed broadly to refer to other instances where something initially helpful to an elite group later benefits a more general constituency, and the concept is invoked with regularity in reviews of audio gear.

It's certainly applicable to the new KEF R11 Meta loudspeaker and the other models in the British manufacturer's R Series that have acquired the Meta designation. "Meta" indicates "metamaterial"—a technology previously utilized in KEF's Reference Series speakers for absorbing the backwave from KEF's ever-improving Uni-Q tweeter/midrange array. Although manufacturers have addressed this issue in various fashions—by placing wadding or foam inside a speaker enclosure or having a tube convey sound away from the driver—these methods have not been entirely successful. An extremely effective way to absorb unwanted acoustic energy is with a quarter-wavelength resonator, the drawback being that it works over only a very narrow bandwidth. This problem notwithstanding, it was the quarter-wave attenuation approach that KEF decided to leverage in its efforts to eliminate the tweeter/midrange's rear output.

The term "metamaterial" sounds like it should represent some sort of novel… well, *material*—something equivalent to the exotic resins and composites used to fabricate the enclosures of Wilson, Rockport, or Estelon loudspeakers. But to an engineer like KEF's VP of Technology, Dr. Jack Oclee-Brown, "the idea of a metamaterial is that, rather than try to find a natural material that does what you want, you create an object that behaves like the material that you really need." In a video on the company's website, Oclee-Brown explains that KEF "synthesized a structure of 30 channels, all optimized in size and length and folded into a disc" that's positioned behind the Uni-Q driver. Sound enters the maze-like structure through a central opening and close to 100% of what goes in doesn't come out, thanks to a device that's essentially 30 quarter-wave absorbers covering the full range of unwanted frequencies. It's a little like an acoustic black hole." The acoustical science behind Metamaterial Absorber Technology (MAT) is fully explained in an easily digested 2020 AES publication [Convention Paper 10341], coauthored by Oclee-Brown and his colleague, Sebastien Degraerve, both of whom participated in the development of KEF's "multiresonator system."

KEF's R Series loudspeakers were first introduced in 2011, and Julie Mullins favorably reviewed the subsequent iteration of the R11 in TAS eight years later. This third version looks just like its two predecessors, and Ms. Mullins described the appearance of the R11s as "attractive." While beauty is in the eye of the beholder and all that, I'll demur on this point. While there's no question that the speakers are well-constructed and nicely finished, I find their sharp-edged, rectangular box form to be pretty ordinary, especially coming from the folks who brought us the stunning Blade and Muon models. That said, if a utilitarian appearance can make the loudspeaker affordable to more audiophiles, I'm all for it—though the retail

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## Specs & Pricing

**Type:** Three-way bass-reflex
**Driver complement:** Uni-Q array (1" vented aluminum dome tweeter + 5" aluminum cone midrange); 4x 6.5" hybrid aluminum woofers
**Frequency response:** 46Hz–28kHz (±3dB)
**Nominal impedance:** 8 ohms
**Sensitivity:** 90dB
**Dimensions:** 12.2" x 51" x 15.1" (with plinth and terminals)
**Weight:** 83.1 lbs. each
**Price:** $6499 per pair

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price has increased by 30%, from $4998 to $6500 per pair. Finish options include the black gloss of the review pair, white gloss, and walnut.

On its readily installed outrigger apparatus and spikes that allow for easy leveling, the speakers stood 51" tall, with a width of 12" and depth of 15"; each weighed in at about 83 pounds. The R11 Metas are a three-way, five-driver system with pairs of 6½" woofers above and below KEF's signature Uni-Q coaxial tweeter/midrange unit. The point-source coaxial Uni-Q driver has been central to KEF loudspeaker designs since 1988. This is the twelfth generation of the driver array, though KEF has actually developed more than 60 versions over the years—there are different variants for different KEF models. Besides MAT, other modifications to the R Series Uni-Q that measurably improve performance have trickled down from above, changes involving the chassis, suspension, and motor top plate.

The woofers are a hybrid design, with an aluminum skin bonded to a paper cone. All four cover the same frequency range and are wired in parallel. Crossover frequencies are centered at 400Hz and 2.9kHz. Another feature of the R11s derived from the Reference line is the "Shadow Flare" geometry of the Uni-Q driver's periphery that has its outermost edge flush with the front baffle. This continues the waveguide effect of the central part of the tweeter/midrange assembly and counters any potential diffraction issues that might derive from the acute edges of the cabinet.

Around back are two ports, each associated with one of the woofer pairs. Owners are supplied with foam port plugs to use if the bass is overwhelming in your listening environment, certainly not the case for me. There are two sets of binding posts to allow for bi-wiring or bi-amping. The mechanism for taking advantage of this option is most welcome: For once, there are no meager, easy-to-lose jumpers to connect the two positive and two negative terminals when single wiring is in play. Instead, there's a knob that's turned to either connect the posts or configure them for separate cables from your amplifier(s). Nifty.

The R11 Metas settled in nicely close to where most floorstanders do in my high-ceilinged 225-square-foot room. They ended up two feet from the shelving and diffusors behind them and formed an equilateral triangle, eight feet to a side, with the listening position. The loudspeakers are supplied with magnetically attaching microfiber grilles that are no mere afterthoughts, with 1801 precision-cut holes in the circular area covering *each* of the five drivers. That's a lot of holes. KEF's literature suggests that leaving the grilles on won't affect the sound. That's not exactly true, but it's close, and I do find the R11s more appealing visually with the grilles in place.

I auditioned the KEF R11 Meta with digital source material only—local files stored on a Synology NAS, discs played on a Sony X1100ES, streaming handled by my Baetis Reference 3. All digital roads led to a Tidal Audio Contros DAC/linestage. Digital wires were Apogee Wyde Eye (SPDIF) and Wire World (AES/EBU); analog cables were Siltech Legend.

Which amplifier(s) did I use with the KEFs? A digression of sorts regarding power amps and loudspeaker evaluation is in order.

There's a school of thought that holds that reviewers ought to evaluate loudspeakers at a given price point with "appropriate" amplification, meaning electronics that are in the same ballpark in terms of quality and cost. I don't see it that way, and my experience with the R11 Metas confirmed this point of view. To be sure, there are good, bad, and simply fortuitous pair-

KEF's Metamaterial is effectively an array of 30 quarter-wave absorbers that absorb the rear wave from the Uni-Q driver.

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ings of electronics and speakers that relate to obvious product characteristics—low-wattage single-ended tube amplifiers versus solid-state monsters, ultra-efficient horns versus power-hungry ribbons, impedance matching, and so on. But no amplifier will make an awful loudspeaker sound good, and a well-designed one will satisfy with a range of electronics. And a *really* good speaker will most fully show what it's capable of with amplification that may seem overqualified for the job. I played the $6500 KEFs with the Peachtree Audio Nova 150 ($1200) used in my living room system for casual listening, Pass Labs XA 60.8s ($13k), the Tidal Audio Intra ($33k, review in progress), and the Tidal Ferios monoblocks ($85k) that usually power my Magico M2s. It was the last of these that gave me my clearest sense of the R11's strengths…and weaknesses. The shortcomings appreciated with the Peachtree integrated were still there with the big Tidals, but the Ferios amps let me hear best what was possible with the KEF loudspeakers.

As I started listening through my equipment review playlist, 40-something tracks from varied musical genres chosen to test some aspect of audio reproduction, my initial response to the KEFs was more measured admiration than heart-pounding ardor. Consider the speaker's low-frequency performance, for example. Although typical in-room bass response is specified as 26Hz, Julie Mullins noted some bottom-octave reticence in her review of the R11's 2018 version, and my assessment of the Metas was the same. Bass was tuneful and articulate—the "walking" bass of a small jazz group, for instance—but pipe organ and Blue Man Group aficionados won't feel fulfilled. Dynamics were crisp, but there was a bit less of what some call "jump factor" with well-recorded jazz fusion—less snap to snares, less punch to kick drums. This could sometimes lead to my turning up the gain to the point where an awareness of the speakers running out of dynamic headroom started to creep in. I could hear a slight flattening of the acoustic perspective, especially as the volume increased.

But then I got to the David Abel/Julie Steinberg recording of the Brahms G major violin sonata, still my favorite chamber music recording (sonically) three-and-a-half decades after David Wilson recorded it at Mills College in California. Abel's Guarnerius violin sounded a bit sweeter than usual, and his subtle shadings of tone color, dynamics, and phrasing were completely unobscured. Steinberg can be heard to respond to those nuances, which furthers a sense of interpretive unity; the performance, which I've heard so many times, was riveting. Likewise, although Nils Lofgren's rendition of "Keith Don't Go" from his *Acoustic Live* album didn't sound as electrifyingly "hot" as it usually does at audio shows, it was arguably more compelling. The focus shifted from the sonics to the astounding facility of Lofgren's singing and playing, where it belongs.

The KEF's ability to deliver on musical values extended to other metrics as well. Massed string sound was excellent and, in general, the best orchestral recordings were colorful but never self-consciously vivid. Gradations in dynamic level were smooth and finely modulated. I was impressed as well by the way the initial attack of a note connected to what followed. This was especially evident with well-made piano recordings, such as Peter Takács' *Pathétique*, taken from his 11-SACD set of all 32 of Beethoven's sonatas. Similarly, vocal sibilants didn't register as disembodied sounds unrelated to the tone they initiated, not with the Anonymous 4 singing a hymn-like Civil War-era song ("Weeping Sad and Lonely") or with a larger group, the Dunedin Consort, performing "For Unto Us a Child Is Born" from *Messiah*.

The more familiar the recordings that I listened to, the better I understood why I was glued to my seat, intensely focused on the music. There seemed to be a complete lack of electromechanical artifice associated with the KEFs that's rare at any price point and allowed the musical meaning of whatever was playing to flow unimpeded from my stereo system. There may have been fewer audiophile thrills-and-chills but plenty else was provided in return—less deep bass, yet a fully satisfying foundation to music of all kinds; less ultra-dramatic spaciousness but more in the way of natural dimensionality; less in the way of "life-like dynamics" but more life. In terms of the sort of reality cues that will matter to a listener who has broad experience with the real thing, there's an exceptional *ease* to the R11 Meta's presentation that should wear very well.

My conclusion is that we have good old trickle-down to thank for this level of performance from a $6500 loudspeaker. KEF's Metamaterial Absorptive Technology has migrated from the substantially more costly Reference line to the R Series products, where it has been effectively integrated into a driver design that the manufacturer has stuck with for 35 years. You can spend $6500 for a floorstander that will impress your dinner party guests playing "Money for Nothing" and *Fanfare For the Common Man* while the table's being cleared, or you can get R11 Metas and commence a journey of musical discovery that could last a lifetime. Which one makes more sense? I think you know the answer to that. tas

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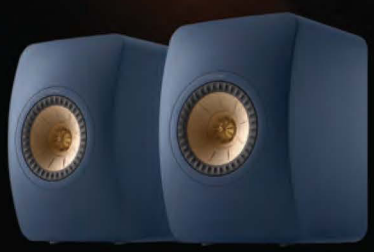

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# Wilson Audio Specialties Alexia V Loudspeaker

## Cut From the Same Cloth

Robert Harley

**In my review of Wilson Audio's Chrononsonic XVX in** Issue 308 (September 2020) I wrote: "The XVX isn't just a landmark for Wilson Audio; I believe that it is a landmark achievement in loudspeaker design." That statement is even more true today than when I wrote it. Wilson's flagship production speaker has become my reference standard and continues to impress even after more than three years of near-daily listening.

At the time, the XVX introduced more innovations than any other single product in Wilson Audio's 42-year history. From an entirely new midrange driver to the in-house-built capacitors, to the "V" material that gives the XVX its name, to myriad other advances and refinements large and small, the XVX heralded a new era for Wilson.

But the XVX has two problems: It is too big for many rooms, and it is priced out of the reach of most music lovers.

Enter the Alexia V. The Alexia, of which there have been two generations before the new "V" reviewed here, sits just above the midpoint of the Wilson line, with the Alexx V and Chronosonic XVX above it and the Sasha (now the Sasha V), Yvette, and SabrinaX below it. Now the long-running Alexia has been given what I call the "V treatment"—a redesign informed by the materials and techniques developed for the XVX. Could the Alexia V bring the essence of what makes the XVX so special to a much wider range of living rooms and budgets? Although still premium-priced at $67,500, the Alexia V costs about one-fifth the XVX's $349,000 price tag.

When the Alexia V was announced, and I looked more closely at its design and considered its mission, I decided that I was the ideal reviewer to assess this new speaker because of my long experience with the XVX. In addition, I could simply move the XVX out of my listening room and drop the Alexia V in its place. By driving both speakers with the same sources, cables, and electronics in the same room, I could take the Alexia V's full measure, particularly how much of the XVX's "DNA" made it into its little brother.

Wilson Audio's Peter McGrath and Tyler Hall visited in early March to perform the swap. You can see a video of Peter and me with the XVX and the Alexia V before and after the swap on *The Absolute Sound*'s YouTube channel. While you're on our YouTube channel, you'll also find an in-depth tour of my listening room's design and construction.

So, how are the XVX and Alexia V similar and different? The XVX is a four-way, seven-driver design with one 12.5" woofer, one 10.5" woofer, two 7" lower midranges, one 4" upper midrange, one forward-firing tweeter, and one upward-firing ambience tweeter. The Alexia V is a three way with 10" and 8" woofers, the same QuadMag 7" midrange driver first used in the Chronosonic XVX, and the same Wilson Convergent Synergy Carbon tweeter

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## Specs & Pricing

**Type:** Three-way dynamic loudspeaker
**Driver complement:** 10" and 8" woofers, one 7" midrange, one 1" tweeter
**Loading:** Rear ported
**Frequency response:** 19Hz–33kHz ±3dB (room average response)
**Sensitivity:** 90dB 1W/1m @1kHz
**Impedance:** 4 ohms, 2.59 ohms minimum (at 84Hz)
**Dimensions:** 15.75" x 51" x 24.25"
**Weight:** 265 lbs. each net
**Price:** $67,500 (in standard finishes)

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**Digital source:** Wadax Reference DAC, Wadax Reference Server, Wadax Reference PSU, Wadax Akasa Reference DC Power Cables, UpTone Audio EtherREGEN Ethernet switch
**Amplification:** CH Precision L10 Dual Monaural linestage; CH Precision M10 Dual Monaural power amplifiers
**AC Power:** Shunyata Everest 8000 conditioner, Shunyata Omega and Sigma NR V2 power cords; Shunyata AC outlets, five dedicated 20A lines wired with identical length 10AWG
**Support:** Critical Mass Systems Olympus equipment racks and Olympus amplifier stands; Center Stage$^2$ isolation, Ayra Audio RevOpods isolation
**Cables:** AudioQuest Dragon interconnects, AudioQuest Dragon Zero and Dragon Bass loudspeaker cables
**Grounding:** Shunyata Altaira system
**Accessories:** The Chord Company GroundArray noise reduction
**Acoustics:** Acoustic Geometry Pro Room Pack 12, ASC 16" Round Tube Traps
**Room:** Purpose-built; Acoustic Sciences Corporation Iso-Wall System

developed for the $135k Alexx V (see Matt Clott's review of the Alexx V in Issue 340).

The other primary difference between the XVX and the Alexia V is the sophistication of the time-alignment mechanism, realized in the XVX with four separate, individually adjustable enclosures and a precise and elaborate sled mechanism for ensuring time alignment between the drivers at the listening position to within 2 microseconds. The Alexia V's is made from three enclosures, with the midrange and tweeter enclosures independently adjustable, but not to the same precision as the XVX.

And yet, I look at the Alexia V and see the culmination of Wilson Audio's fundamental technologies, now taken to a new level with the advancements developed for the XVX. The Alexia V benefits from more than 30 areas of improvement over its predecessor, the Alexia Series 2. Most notably, the Alexia V incorporates the "game-changing" "V" material first used in the XVX, which inspired that speaker's name. "V" material reportedly exhibits extraordinary damping properties, that, when deployed in strategic locations, results in a quieter cabinet. Specifically, the "V" material is positioned between the woofer enclosure and the midrange-tweeter section, isolating the upper enclosures from the woofer cabinet. It is also found within Wilson's Acoustic Diode feet, which come standard with the Alexia V. The Acoustic Diodes were not yet developed when the XVX was first installed in my listening room, but I added them later, which allowed me to hear their effect independently of other variables. The Acoustic Diodes are a significant upgrade over Wilson's standard feet, rendering cleaner attacks and more rapid decays that contribute to greater articulation and clarity.

But the star of the XVX, and now of the Alexia V, is the Wilson-developed QuadMag midrange driver. I think of this driver as the heart and soul of the XVX; it is, I believe, a major contributor to the XVX's unparalleled sense of harmonic beauty through the midrange. The XVX's midrange is soft and gentle, yet simultaneously highly resolving and lifelike. The resolution isn't an "audiophile" type resolution in which details are prominently projected, but rather its resolution is in the way the driver reveals the richness and delicacy of instrumental harmonics with a subtlety and sophistication that elude so many other speakers. The midrange driver's density of tone color is simply gorgeous and conveys a totally natural and lifelike sound rather than an artificial emphasis on upper midrange energy that produces a false sense of detail. I think of it as "musical resolution" rather than "sonic resolution." The musical rewards of this type of presentation are profound; the XVX makes you instantly forget you are listening to a recreation rather than to music itself.

That same Wilson-designed midrange driver is now the foundation of the Alexia V. The midrange is named the QuadMag for its strategic array of four magnets. Interestingly, the magnets are not made of a rare-earth material but of classic Alnico (aluminum, nickel, and cobalt), which has been used for decades for driver magnets. The Convergent Synergy Carbon tweeter is also fairly new, making its first appearance last year in the $135,000 Alexx V. The tweeter's rear-wave chamber is built in-house via 3D printing.

Not surprisingly, the Alexia V's enclosure is made from a combination of materials, including Wilson's long-standing "X" and "S" materials. Other improvements inspired

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by the XVX include in-house-made capacitors (first used in the XVX), an improved woofer port that increases laminar air flow, increased midrange and woofer enclosure volumes, and a host of other small refinements that add up to a significant improvement of the Alexia platform. This is a good place to mention that all Wilson speakers, from the SabrinaX to the WAMM, are built to the identical standard of quality and finish. The lower-priced speakers are simply scaled down in size, not in build or finish quality. Speaking of finish quality, the Alexia V is spectacular. Every element, down to the machined aluminum-and-glass panel that covers the rear-panel resistors is exquisitely realized. By now, it goes without saying that the paint quality is extraordinary—glass-like in smoothness and utterly flawless. Overall, the Alexia V is a beautiful and compelling package.

## Listening

As mentioned, the Alexia V replaced the Chronosonic XVX in my listening room, driven by identical sources, electronics, and cables. My first impressions were that the XVX and Alexia V share many sonic characteristics but with the Alexia V sounding a bit more forward, incisive, and "extraverted." The XVX is more subtle and refined, a little darker in tonal balance, and "bigger" sounding in every sense of that word, as would be expected considering the size difference.

Nonetheless, it was readily apparent that the two speakers were cut from the same cloth. This was particularly true in the bass, long a Wilson strength. Wilson speakers have been known for their powerful midbass energy and dynamic impact. But the latest generation of Wilson speakers, starting with the XVX, has taken that quality and elevated it to an entirely new level. The earlier generations of Wilson speakers had midbass power, but the low bass rolled off, and there was a discontinuity between different bass registers. In the XVX and now in the Alexia V (and other newer Wilson models), the visceral midbass authority is there but with greatly extended deep bass, much better resolution of tonal color, greatly improved pitch articulation, and more precise dynamic expression. In addition, the newer Wilson speakers seem to have a kind of "grip" in the way the woofers couple to the air in the room. The bass seems to lock in with a muscularity and authority that benefits any genre of music. This characteristic extends all the way to the bottom octave in a perfectly linear and seamless way. This linearity results in a greater continuousness in power, texture, articulation, and dynamics from the lowermost octave all the way up to where the bass blends seamlessly with the midband. The musical effect is profound; bass guitar generates visceral, whole-body involvement, and the way the kickdrum and bass guitar work together to create a "pocket" is simply sensational.

With the Alexia V, Wilson has brought this extraordinary bass performance to a smaller and more affordable speaker. Although the Alexia V doesn't go quite as low or move as much air as the XVX, it has that unmistakable "grip" I mentioned, a powerful muscularity throughout the entire bass region (not just the midbass), density of tone color, pitch resolution, dynamics, and a continuousness from the low bass all the way up to the midrange. Moreover, the bass is perfectly balanced with the rest of the spectrum, with a satisfying fullness and weight that never veers into sounding overblown, thick, or excessively heavy.

To hear all these qualities in a single recording, listen to the superbly recorded solo acoustic bass of Brian Bromberg playing a rendition of "Blue Bossa" from his album *Wood II*. An entire track of solo bass may not be your thing, but the piece showcases the Alexia V's thrilling combination of bass weight, tone color density, precise pitch definition, and dynamic articulation. As Bromberg exploits the instrument's full expressive capabilities over its entire tonal and dynamic ranges, the Alexia V's illusion of a large wooden instrument existing between the loudspeakers never wavers. The speaker follows every nuance of dynamic expression, articulates every transient, resolves pitch with aplomb, and sounds just as realistic in the instrument's lowest register as in its highest. Another recording that showcases the Alexia V's remarkable bass is the title track from Spirogyra's 2009 album *Down the Wire*, written by the group's bassist. This is some of the funkiest electric bass playing on record, with the Alexia V delivering a powerful rhythmic experience by virtue of the qualities I've just described. Orchestral performances are anchored with tonal solidity; the fabulous-sounding *Arnold Overtures* on Reference Recordings in 176/24 showcases the Alexia V's ability to convincingly portray an orchestra's bass section with tonal authenticity and texture. Another quality: The upper bass is so clean and fast that the transition to the midrange is seamless. This clarity in the upper bass allows the midrange to sound open and transparent. Speakers with thickness in the upper bass seem to cloud the entire midrange and reduce the impression of midrange transparency.

Although the Alexia V may not go as deep as the XVX, or have quite the same power and weight, the Alexia V's bass is simply phenomenal in every way and fully satisfying. I've heard much larger and more expensive speakers that don't deliver the bass performance that seems to come so easily to the Alexia V. Although I've been spoiled by the XVX's unparalleled bass, I thought to myself after living with the Alexia V for a few months that I would be fully satisfied with the smaller speaker's bottom end. Moreover, I never approached the Alexia V's dynamic limits; even playing music with strong bass energy at high levels, the woofers exhibited no sign of strain.

It's worth noting that Wilson's approach to woofers is different from that of any other manufacturer. Wilson developed the disparate woofer-size method in 1992 with the X-1 Grand Slam and has been refining it ever since. In the very few speakers from other companies that use woofers of different sizes, each woofer is housed in its own enclosure. I don't know the technical reason for Wilson's approach, but the company seems to have discovered and exploited a different technique for superior bass reproduction.

With the Alexia V establishing a powerful tonal and rhythmic foundation, the speaker's virtues continue with a beautifully rendered midrange and treble. As mentioned, the Alexia V's mids

and treble are a bit more forward and incisive compared to the XVX, yet the Alexia still exhibits the harmonic richness and warmth in the lower midrange that makes the XVX so involving. Brass and woodwind instruments have a full measure of weight and tonal density in their fundamentals and lower-order harmonics without the artificial emphasis on upper harmonics that can impart a metallic sheen to trumpet, saxophone, and the human voice. Yet despite the tonal smoothness, the Alexia V projects a strong sense of presence and of instruments existing between and around the loudspeakers. Listen, for example, to Samara Joy's gorgeous voice and beautiful phrasing on the track "Two Hearts" from Terri Lynn Carrington's Grammy-winning album *New Standards, Vol.1*. The comparisons by some jazz critics between this 22-year-old phenom and Ella are justified. Here, singing a ballad, Joy's voice is pristine, crystal clear, and projected with a palpability and realism that are striking. The Alexia V adeptly expresses the exquisite texture of her voice and every nuance of her mature and sophisticated phrasing. The beautiful sax solo on this track also showcases the Alexia V's lower-midrange warmth and texture, along with a smoothness and lack of glare in the upper midrange. The instrument has a tonal density that complements the mood of the track. In these respects, the Alexia V sounds very much like the Chronosonic XVX. The XVX, however, benefits from two midrange drivers, along with a two-way midrange in which a 4" driver handles the upper end of the midrange for greater dynamic speed and steepness of attack. Nonetheless, the XVX's harmonic beauty, clarity, and ability to project a realistic sense of palpability are readily apparent in the one-fifth-the-price Alexia V. And as everyone knows, the midrange is the heart of a speaker and where most of the music lives. I've always subscribed to J. Gordon Holt's famous dictum: "If the midrange isn't right, nothing else matters."

Sharing the XVX's Quad-Mag midrange driver with the Alexia V may also explain the Alexia V's resolution of detail. Here, I'm talking not about the resolution of instrumental timbre described earlier, but rather the ability to hear individual instruments within the presentation. That is, the presentation of a soundstage composed of separate instruments, each one clearly articulated rather than congealed into confused homogeneity. In addition to sounding more like live music and less like a recreation, this quality makes a speaker more musically rewarding because it enables one to shift his attention from one instrument to another and to hear each instrument as a separate entity within the whole. A good example is the track "Elucidation" on *Like Minds* by Gary Burton, Chick Corea, Pat Metheny, Dave Holland, and Roy Haynes. Each of these virtuoso musicians is always playing something interesting, whether soloing or accompanying a soloist. The Alexia V allowed me to fully hear each musician's contribution.

The Alexia V doesn't have quite the same speed as the XVX—as noted, the latter features a two-way midrange implemented with dual Quad-Mag 7" drivers and a 4" upper-midrange driver. That smaller midrange provides the initial transient speed to deliver the "pop" of a drumstick hitting the drumhead or the steep attacks of percussion transients that bring them to life. But that state-of-the-art performance doesn't diminish the Alexia V's achievement in rendering an absolutely thrilling reproduction of the drum kit and the concomitant musical rewards of such an upbeat, rhythmically powerful, and propulsive presentation. This transient "pop" on drums combines synergistically with the powerful and well-defined bass to provide the sense of rhythmic propulsion I've been describing. A friend recently introduced me to reggae, a musical genre that I never responded to. But after listening to some classics of the genre, attending a reggae festival, and seeing the venerable band Steel Pulse live twice, I developed a newfound appreciation for the music. Moreover, the music has a unique rhythmic feel that is easily diluted by a loudspeaker. But listening to Steel Pulse's classic album *True Democracy* through the Alexia V provided another perspective on the exceptional way the Wilson conveys body-motivating rhythmic expression, along with its addictive combination of bass weight and speed.

It's interesting that after a period in which it appeared that tweeter domes made from progressively harder materials such as diamond and beryllium were poised to displace older soft-dome designs, many cost-no-object speakers are sticking with—or returning to—soft domes. In theory, hard metal domes have an advantage in that the frequency at which they "break up" (become non-pistonic) is much higher than that of soft domes. And yet, soft dome tweeters seem to have a more relaxed and natural character. That is an overgeneralization; there are superb speakers that use metal-dome tweeters. Many years ago, when I visited Wilson Audio to preview David Wilson's *magnum opus*, the WAMM, David showed me a large array of raw tweeters of

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various designs and materials. He had measured and listened to every one of them in designing the WAMM and told me that the tweeter's cost was not an object for this statement of his life's work. Then he showed me the soft dome tweeter he'd chosen for the WAMM and explained why he picked it over metal dome units. Since then, Wilson has developed its own soft dome tweeter employing an elaborate rear chamber behind the dome that Wilson manufactures in-house on a 3D printer.

Although the Alexia V's treble sounds a bit more forward to me than that of the XVX, it has a smoothness and ease that foster a sense of relaxation and involvement. As with the midrange, the Alexia V's top end has beautiful resolution without calling attention to itself. Rather, it blends seamlessly into the musical fabric without sounding like a separate component of the music, as is often heard from lesser loudspeakers.

## Conclusion

I hope that my comparisons between the $349,000 Chronosonic XVX and $67,500 Alexia V are not viewed as invidious. My intent was to put the Alexia V's performance in context with the reference-grade speaker from which much of its design was derived. Indeed, viewed from this perspective, the Alexia V is a triumph. It brings many of the virtues of the XVX to a smaller and more affordable loudspeaker, making lots of that reference speaker's special qualities available to a larger number of music lovers. Chief among these virtues is the Alexia V's spectacular bass performance. The Alexia V struck the perfect balance, delivering powerful weight and muscularity yet never sounding thick or overblown. This combination of power and finesse was musically rewarding. The Alexia V's "grip" and ability to pressurize the room with a tuneful and resolved bottom end established a compelling foundation for the speaker's many other qualities. Although not as refined as that of the XVX, the Alexia V's midrange nonetheless shares with the XVX the sense of harmonic beauty and warmth that is one of the Chronosonic's defining features. This smoothness and ease extend to an upper octave that resolves real musical information without a metallic edge. Finally, every detail of the Alexia V's design and build exudes the highest level of quality and craftsmanship.

Some readers object to the very existence of a $350,000 speaker like the Chronosonic XVX. But because there is a market for cutting-edge designs that allow designers to push the boundaries of what's possible in music reproduction, the technologies developed for cost-no-object products can trickle down into more accessible offerings that a greater number of people can enjoy. The Alexia V is the very embodiment of that idea. tas

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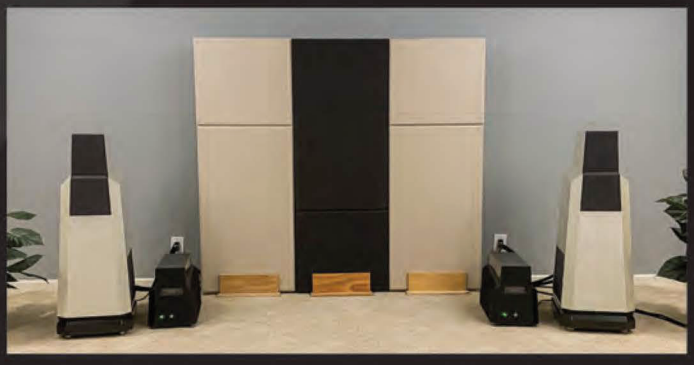

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# THE BEST GETS BETTER

## MBL 101 X-TREME MKII LOUDSPEAKER

BY JONATHAN VALIN • PHOTOS BY PETER WESTPHAL

# THIS

article marks the third time in a decade and a half that I've reviewed the MBL X-Treme *Radialstrahler* system. On the first two occasions, I evaluated the MKI versions of these gigantic, four-box, omnidirectional loudspeakers—the original and the 10th Anniversary Edition (which incorporated small, audible improvements to the *Radialstrahler* drivers and their tower structure).

This time around, I'm going to talk about the MKII 101 X-Treme, which has new and substantially different subwoofer stacks. It is the first major change to the 101 X-Tremes in 16 years, and MBL's genius designer Jürgen Reis has deemed it a large enough sonic improvement to award the speaker a MKII designation—and justify raising the price of the entire system to a staggering $398,000. (Current MKI owners can purchase the new subwoofer stacks separately for a paltry $159,200 or upgrade their MKI subs to MKII status by shipping them to the factory for extensive modifications. Please check with MBL about this possibility.)

Obviously, you have to be made of money to consider buying the X-Treme MKII system or the MKII sub stacks. So, to jump the highest hurdle at the start, is this new MBL flagship worth the fortune being asked for it (assuming, of course, that you have this kind of dough to spend on an audio system without instigating divorce proceedings or involuntary civil commitment)? The answer (or my answer) is an unqualified yes. As I said to Jürgen and MBL's American importer Jeremy Bryan, after they'd finished installing the new MKII sub stacks in my room, and we'd played Drake's synth-poppy "Hold On, We're Going Home" from *Nothing Was the Same*, "I've never heard anything like this before!"

Of course, that wasn't completely true. After all, I'd been living with the 10th Anniversary MKI versions of the *Radialstrahler* system for four years. And yet, in spite of the fact that from 85Hz up the *Radialstrahler* parts of the system are literally the same as those of the MKIs, the MKII isn't just a little different sounding than the originals. It is *astonishingly* different sounding—and astonishingly better.

If all that has been changed are the subwoofers, how is this possible? Well, anyone who has ever played around with subs can take a stab at answering that question. The fact is subwoofers don't just supply missing low bass; they also change the sound of the speaker system they're underpinning—its tonal balance, dynamic range, resolution, staging, imaging, timing, and pace—in ways that are often for the better and sometimes for the worse. On this last point, the trouble with "add-on" subs typically isn't in the bottom octaves proper (though subs can and do excite room nodes that weren't as audible prior to their addition); it's in the midband, where they cross over to the mains and, ofttimes, mask their character to the extent that they no longer sound like the speakers you originally bought.

Of course, "add-on" subwoofers are different critters than MBL's sub stacks, which are engineered as integral parts of a four-way loudspeaker system. Whatever "masking" they may do—and there is none apparent in the MKI or the MKII—is simply part and parcel of the 101 X-Treme package.

I guess we should revisit that package before talking about what has been changed in the MKII stacks, and I'll begin by rehashing sections of my January 2020 review of the 10th Anniversary 101 X-Treme MKI.

As I wrote back then, there was a time in the late 60s and early 70s when omnidirectional loudspeakers were the audiophile rage. Of course, it was the much-maligned Bose 901s that chiefly spurred this craze, followed by a truckload of three-sided, four-sided, and six-sided imitators. Though the Boses were not true omnis, which is to say they weren't generating equal amounts of sonic energy in *all* directions at all frequencies, they did use the listening room, particularly the wall behind them, in a way that most other loudspeakers of their day did not—and that acoustic instruments in concert halls always *do*.

You see, a large proportion of what we hear at a live event is not direct sound but indirect sound bounced off the walls, floor, and ceiling of the venue—reflected energy that profoundly affects the timbre, the dynamics, the durations, the imaging, the very character of the sonic presentation.

*Why* hall reflections play such a large part in what we hear has to do with the way instruments make music. A violin, for example, doesn't launch a series of notes in a single plane or in a single direction, as if it were emitting a tightly focused beam of light aimed directly at you, the listener; it radiates its energy throughout 360 degrees, both vertically and horizontally, casting sound into space the way a softly glowing bulb casts light. Of course, that violin isn't generating the same amount of energy at every vector or at every pitch. But it is always radiating in three dimensions, and therefore always merging its direct sound with the indirect sound it is reflecting off the walls, floor, and ceiling of the hall or room in which it is being played. Another way to put this is to say, in Amar Bose's famous phrase, that instruments behave acoustically like "pulsating spheres." They are true point sources, which (because of their spherical wavelaunch) always produce a mix of direct and reflected sound in any room at any listening position.

It is only a small (though not unproblematical) step from observing that if instruments invariably behave like point sources, loudspeakers should, too—that to accurately reproduce what an instrument in a concert hall

or a studio sounds like speakers should also mimic that instrument's 3-D radiation pattern, which is so intimately tied to our perception of its tonality, dynamics, durations, and presence.

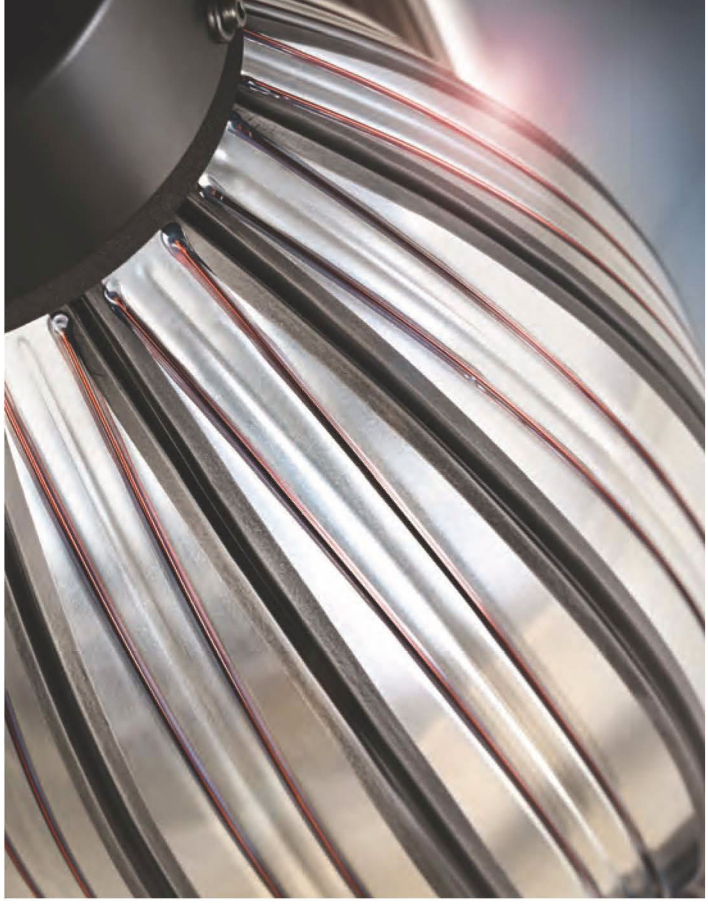
That's the theory, at least. And with the 101 X-Tremes the theory proves out beyond highest expectations. As I wrote 16 years ago in my review of the original version of the X-Tremes, "while we all listen, perforce, blind to stereo, the 101 X's go further towards compensating for our hunger to see what we hear—to fulfilling the definition of the word 'stereo' (which literally means 'three-dimensional' or 'solid')—than anything else I've auditioned."

In addition to their incomparably realistic 3-D presence, omnis have obvious sonic benefits when it comes to soundstaging and imaging—one of which you can demonstrate to yourself by merely abandoning the "sweet spot" midway between those direct-radiating cone loudspeakers currently ensconced in your listening room. As you doubtlessly already know, when you move right or left of center, so does the soundstage, which tends to collapse towards the speaker you're nearing, as if the instruments and vocalists were gradually sliding off a tabletop tilted in the direction you're heading.

This does not happen in real life. If you move from centerstage to a seat at stage left or stage right in a concert hall (or in a rock club, for that matter), the soundstage does not "collapse." Oh, the instruments located in the direction you've moved sound louder and more prominent (because they are, in fact, louder due to your closer proximity to them), but the rest of the orchestra or band still spans the stage in the opposite direction, the soloist/vocalist still sounds roughly centered, the hall's ambience still encompasses all instruments evenly, rather than thinning down in the distant direction and thickening up in the proximate one. With an omni, you get the very same effects you hear in life. Sitting, standing, shifting your head or your seat (even moving behind the speakers), you experience the same stable imaging and soundstaging.

As a dyed-in-the-wool audiophile, listening alone with your "head in a vise" may be something you've grown used to (I certainly have), but it is not the most natural or relaxing way to enjoy music; nor, when it comes to your non-audiophile visitors, is it the most congenial and inviting. I don't know how many times I've told some bewildered newbie to "sit in the middle"—and if, as is often the case, there is more than one such visitor, to "let so-and-so have the sweet spot." It's rude and embarrassing—and one of the chief reasons, beyond the baffling complexity and absurd expense, that so many neophytes find high-end audio off-putting. While omnis like the 101 X's certainly won't solve the complexity or expense problems, they will go far towards making listening to music the unconditional joy it is (and ought to be).

And then there's the felicitous (and natural) way omnis deal with an audiophile's chief bugaboo—the listening room and its inevitable issues. While some of our writers seem to believe that every room problem can be solved via a good dose of DSP salts, I do not. EQ'ing outboard subs (whose output is inherently omnidirectional) to iron out room nodes in the



bass is one thing (and generally a salubrious one); DSP'ing an entire system (whose output is *highly* directional) to make it measure flat or rolled or whatever flavor you choose or to doctor the perceived problems in a poor recording is another. In my experience, you may be able to get things close to the way you want them to be at one roughly microphone-sized spot right smack between your loudspeakers (at least, you can until you cave in to the nearly irresistible urge to start fiddling with DSP again), but what is being scanted or ignored here is how much more completely and unavoidably such DSP adjustments lock you into a single listening "sweet spot." Talk about having your head in a vise! If you move your noggin sufficiently right or left or up or down, or (God forbid) move to a different chair in a DSP'd system, all that painstaking digital manipulation will be audibly compromised. Sometimes, it will go right down the drain—in fact, moving off DSP'd axis may make room problems much worse.

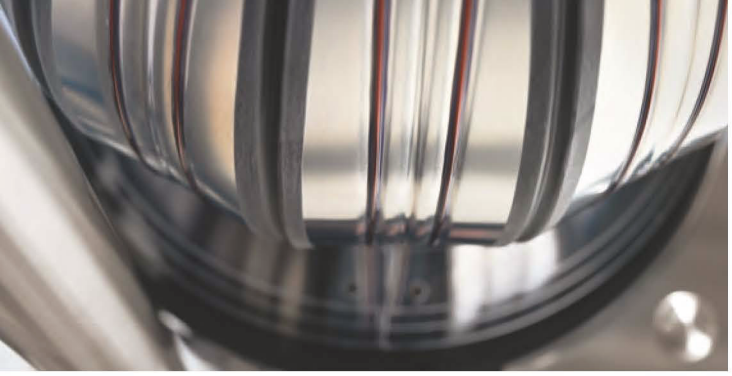
Omnis in general (and the 101 Xes *par excellence*) deal with room modes in an entirely different and wholly acoustic way—by flooding the listening space with full-range sound, coming (because the speakers radiate omnidirectionally both horizontally and vertically) from a nearly infinite number of different elevations and a nearly infinite number of different angles. You might think that energy being broadcast in equal amounts at all frequencies toward literally every surface of your room would make the sound you end up hearing a confusing, echo-chamber-like mess. That it doesn't has to do with two interrelated phenomena: a true omni's (like the 101 X-Treme MKII's) frequency-independent, constant-directionality dispersion and the Precedence Effect (by which sounds in the first 50ms or so are fused together by the ear/brain and perceived as a single sonic event).

First, unlike conventional loudspeaker drivers (particularly tweeters) that tend to send intense spotlight-like beams of inherently more distorted off-axis sound toward sidewalls, an omni doesn't "selectively" energize specific spots on your walls. As I noted, it doesn't work like a specular flashlight. It works like a glowing ball. It energizes your room *uniformly* at all frequencies, so that any reflections will comprise the *entire* signal and not a small piece of it.

Why is this important? I'll let MBL's Jürgen Reis answer that question: "Though they are often used in loudspeaker development (and print and Web advertisements), anechoic frequency-response measurements taken on-axis only correlate with 2% of what we perceive when we're listening to a loudspeaker in our rooms. Frequency response measurements taken within a larger 'listening window' of, say 15–30 degrees up and down and right and left of center improves the correlation to about 12%.

"Be this as it may, in the first 3ms what we hear in a hall or at home is direct sound only. Localization—where things are, left, right, center—is determined by this direct sound, and because of its homogeneous output, no matter where you sit with an MBL omni the direct sound and its localization effects will be the same.

"At around 10ms we hear early reflections—sounds that have bounced off walls, floors, or ceilings at least once. If the music was recorded nat-



urally (e.g., the musicians were playing in real rooms, and their sound was picked up by spaced or cross-paired microphones), recordings may include the early reflections of the venue itself. Many studio recordings (e.g., pop or hip-hop tracks) do not include early reflections. Nonetheless, *you* always hear the early reflections of your room when you play these records back at home.

"In a hall or on a recording, these early reflections tell you how big the venue is—where the walls are and where the musicians are vis-à-vis those boundaries. This sense of spaciousness and dimensionality is also keyed to the way early reflections merge with the acoustics of the listening space. When these early reflections have the same tonal characteristic that the direct sound has (as they do with MBL omnis), we perceive the reflected sound as natural; with direct-radiating loudspeakers, the reflected sound has a totally different frequency response than the direct sound, which we hear as unnatural, sometimes annoyingly so. Early reflections are 44% of the sound we hear in a hall or at home, which is part of the reason why omnis, which generate these reflections uniformly and homogeneously in phase, time, intensity, and timbre, can sound so three-dimensionally lifelike and can more fully merge the sound of the recording space with that of your listening space.

"At about 50ms, we get the third part of music heard in a hall or listening room—so-called 'room energy.' Each instrument needs a finite amount of time to build up a note's shape, from starting transient to steady-state tone to decay. The addition of room energy helps fill out the dynamic/harmonic envelope. As with early reflections, room energy is also 44% of the sound that we hear in our homes (or in concert venues). And again, as with early reflections, in order to feel 'at home' with a recording and relax into the music, the timbre of the room energy must match the timbre of the direct and reflected energy in your space. Once again, because of their more homogeneous and uniform reflection of tonal qualities, MBL's omnis produce room energy in a more natural, thorough, and enjoyable way."

Far from being more colored by room reflections, drivers, and enclosures, sophisticated (and in the 101 X MKII's case, boxless) omnis can, in principle, be much less colored by all these things and much more faithful to sources because with proper setup they essentially take speaker-directivity anomalies *out* of the equation and pair with your room in much the same way that instruments do. Thanks to the Precedence Effect and the fact that the speakers are lighting up reflective surfaces uniformly at all frequencies and all angles rather than selectively at specific frequencies and specific angles, your room no longer exists as a separate entity—like a picture frame within which the recorded soundstage is mounted, which is the way soundstaging generally works with a direct-radiating loudspeaker. Instead, the entire listening room merges with the recorded space, producing a wall-to-wall-to-ceiling-to-floor soundfield of astonishing layered depth and uniform ambience.

Despite the brilliance of their design principle and the important things they got right, early omnis, such as the original Bose 901s and

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their multifaceted descendants, were still essentially cones in a box—and liable to all the problems that cones and boxes entail. With the exception of the Walsh driver (an incredibly brilliant concept that suffered from a plethora of practical problems, which limited its viability), it is puzzling that no one thought to make a pulsating spherical driver to imitate all those pulsating spheres in an orchestra or a band. And then along came MBL, which did that very thing, and then, a decade or so later, along came a world-class engineer named Jürgen Reis, who perfected MBL's *Radialstrahler* concept and eventually designed the 101 X-Tremes.

In spite of all the genuine advances that have been made in the materials that cones and enclosures are made of (and don't get me wrong, those materials *have* greatly improved their sound), there isn't anything fundamentally new about moving-coil loudspeakers (or about 'stats or horns, for that matter). They are mature technologies, several of which have been around for almost a hundred years (more than that for horns). Yes, a carbon-fiber woofer is different (and sounds markedly different) than a paper or plastic or woven-fiber or ceramic one. But it's still a cone woofer with a surround and a spider, and it's still sitting in a gigantic box (nowadays made of aluminum or carbon-fiber or acrylic or stone or some mystery-meat material called "X," "Y," or "Z"). A *Radialstrahler*, folks, isn't like that. It's not just another pretty face in the same old beauty pageant.

What is a *Radialstrahler*? It is a free-standing (unenclosed) radial driver with a membrane made of bent segments that are fixed on one side and connected to a voice coil on the other. In MBL's classic 101 E floorstander—the current version of the company's original "radial loudspeaker" (which is what *Radialstrahler* means)—there are three spherical drivers mounted directly atop each other (and a conventional, ported subwoofer mounted beneath the radial array). The woofer (the large, bottommost radial driver) comprises 12 bent segments (or lamella), made of a proprietary alloy of copper, magnesium, and aluminum and arranged in a quasi-spherical (or melon-like) shape. The smaller midrange driver, which sits atop the cap piece of the woofer, also comprises 12 bent segments, made of a woven carbon-fiber material and arranged in a sphere. The even smaller tweeter perched atop the midrange's cap piece has 24 bent segments, made of a proprietary unidirectional carbon material and also arranged in a spherical shape. When the drivers' moving coils move, the segments of the drivers flex, accordion-like, creating sound pressure throughout 360 degrees, horizontally and vertically.

As all drivers share the same central axis, the listener gets, in designer Jürgen Reis' words, the same "timing of the woofer, midrange, and tweeter…[the MBLs'] alignment allows all frequencies to reach the listener's ears at the same moment, just as they do in nature.

"[In our speakers] the only active surfaces are the radial drivers, which are 'naked' and exposed with no cabinet enclosures. Conventional loudspeakers have drivers that move and a cabinet that should not move. If you take the relation of the driver size to the cabinet size, the cabinet can be up to ten times larger than the driver in surface area. Even if the driver is of top quality and the cabinet is designed to be perfectly rigid, it still vibrates. And even if the cabinet vibrates only a fraction of a millimeter, this will influence the sound quality.

"With *Radialstrahlers* you have the membranes and nothing else. No cabinets, no surrounds, no spiders—all of which can absorb energy and vibrate afterwards. When the *Radialstrahlers*' moving coils start to move, the membranes start to move; they immediately start to make sound pressure. And when the membranes stop, the music stops immediately. No decay, no wasted energy, nothing. We have no delay or time smear at the beginning of an impulse and no delay or time smear at the stop of an impulse. *Radialstrahlers* are time coherent, radiating sound with the same phase."

As in the MKI versions, the *Radialstrahler* part of MBL's new flagship 101 X-Treme MKII is essentially two 101 Es without their subwoofers and subwoofer cabinets. One trio of radial drivers (woofer, midrange, tweeter) faces upward and another, immediately above it, downward, in a mirror-image or D'Appolito array. The bottom trio of *Radialstrahlers* is mounted on a massive base constructed of birchwood, brass, and aluminum in a constrained-layer sandwich; the upper set is bolted to a similarly massive top piece, also made of a constrained-layer sandwich of birch, brass, and aluminum, with a high-quality dynamic "ambience tweeter" nestled out of sight on its roof. Struts and cross members provide top-to-bottom and side-to-side structure and support. Outside of these struts and cross members, there is no enclosure. Each speaker weighs a quarter of a ton.

In addition to the gigantic *Radialstrahler* "towers," the 101 X-Tremes come with two six-foot-tall subwoofer towers that weigh better than a quarter of a ton each all by themselves. Each sub array comprises three ported, lacquered birch, brass, and aluminum boxes, fitted on top of each other via heavy-duty precision stainless-steel pegs and sockets, with the sub crossover controls and the MBL Class D LASA 2.0 amplifier that drives the entire array housed in the middle box. Two 12" dual-layer aluminum-cone drivers are mounted in a push-push configuration inside each of the three boxes—one woofer on the right side of the enclosure, one on the left, both stabilized and cross-braced by massive aluminum rods running between them to prevent the drivers from passing resonant energy to each other and to the box itself. That makes a total of six 12" woofers per speaker-side, twelve 12" woofers altogether.

*That*, my friends, is a lot of bass. And *that* is where all the changes in the MKII have been made.

Now, before delving into these changes, let me say (as Jürgen also does in the sidebar) that the major parameters (frequency response, phase, sensitivity) of the MKII sub stacks are exactly the same as those of the MKI subs. The MKI X-Tremes will still go down to 20Hz and mate with the *Radialstrahler* towers with outstanding seamlessness. What has

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- Robert Levi,
*Positive Feedback Online*, June, 2023

"There are differences between a $2,500 cartridge and ones that cost north of 10k. The Hana Blue just lessened that gap. I am quite confident that in 10 years the **HANA Umami Blue** will be regarded as one of those products that was "the one to beat", at or anywhere near its price tag."

- Dean Cacioppo, *Tracking Angle*, June, 2023

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been made different in the MKII sub stacks is the amount of energy the drivers are capable of delivering between 20Hz and 30Hz. Jürgen has also added two entirely new, built-in, completely analog (A-to-D/D-to-A conversion would add delay) parametric equalizers that allow you to tame room nodes below 100Hz (although, as Jürgen tells you, you don't want to completely "flatten" these nodes, lest you lose the sonic characteristics that make your room sound like *your* room).

Why did Jürgen decide to change the sub stacks—and to *only* change the sub stacks, as opposed to changing the *Radialstrahler* array, as well? Because the *Radialstrahlers* didn't need changing, and (as you're about to read) the subs did. Moreover, as Jürgen says (and I've already noted and subwoofer fans can attest), changing the bass changes *everything*.

What was wrong with the sub stacks as they stood that required improvement? As Jürgen tells you in the sidebar interview, the answer has to do with the energy content of current recorded music. When the original X-Tremes were developed about a decade and a half ago, the AES (which keeps a running tally of the average energy-over-time-and-frequency in commercial recordings) recommended a low-end limit of 50Hz for loudspeakers, which the MKIs easily accommodated. In 2017, with the popularity of synth-driven pop, jazz, and hip-hop and fuller-range recording/playback techniques for all kinds of music, the AES' low-end recommendation was reduced to 20Hz.

The MKI subs would certainly go down to 20Hz, but because of restricted dynamic headroom they wouldn't deliver the *full power* of instruments capable of 20–30Hz notes. To remedy this, the MBL subs' drivers, enclosures, crossovers, and inputs had to be re-thought and reconfigured.

I'm not going to go through all the physical and electrical advances that Jürgen has made in the MKII sub stacks. For that, you should read the

## SPECS & PRICING

**Type:** 4-way system with double tweeters, midranges, and woofers (D'Appolito arrangement), up-firing silk-dome ambient tweeter, and active subwoofer stack per side
**Acoustic center**: 100cm/39"
**Subwoofer:** Active subwoofer, each channel 6x12" (per side) aluminum cone drivers in three cabinets, push-push arrangement, cabinet volume 3x86liters
**Woofer:** 2x Radial TT100 (per side), copper-aluminum-magnesium
**Midrange:** 2x Radial MT50 (per side), woven carbon fiber
**Tweeter:** 2x Radial HT37, unidirectional carbon fiber
**Lowest frequency**: 24Hz
**Crossover frequencies:** 85Hz, 600Hz, 3.5kHz
**Nominal impedance:** 2 ohms each channel; 4 ohms each upper/lower *Radialstrahler* trio
**Continuous power handling each channel:** 320W @ 4 ohms each *Radialstrahler* trio of drivers (one upper, one lower trio per side)
**Dimensions:** Radial system: 496 x1854x687mm; subwoofer: 410x1860x670mm
**Weight:** Radial system: each channel 584lbs.; subwoofer: each channel 500lbs.; total system: 2170lbs.
**Price:** $398,000 MKII system; $159,200 for MKII subwoofer stacks. (Upgrade from MKI subs to MKII subs is possible, check with MBL for terms and conditions.)

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**JV'S REFERENCE SYSTEM**
**Loudspeakers:** MBL 101 X-Treme MKII, Stenheim Alumine Five SE, Estelon X Diamond Mk II, Magico M3, Voxativ 9.87, Avantgarde Zero 1, Magnepan LRS+, MG 1.7, and MG 30.7
**Subwoofers:** JL Audio Gotham (pair)
**Linestage preamps:** Soulution 725, MBL 6010 D, Siltech SAGA System C1, Air Tight ATE-2001 Reference
**Phonostage preamps:** Soulution 755, Constellation Audio Perseus, DS Audio Grand Master
**Power amplifiers:** Soulution 711, MBL 9008 A, Air Tight 3211, Air Tight ATM-2001, Zanden Audio Systems Model 9600, Siltech SAGA System V1/P1, Odyssey Audio Stratos, Voxativ Integrated 805
**Analog source:** Clearaudio Master Innovation, Acoustic Signature Invictus Jr./T-9000, Walker Audio Proscenium Black Diamond Mk V, TW Acustic Black Knight/TW Raven 10.5, AMG Viella 12
**Tape deck:** Metaxas & Sins Tourbillon T-RX, United Home Audio Ultima 5 OPS-DC
**Phono cartridges:** DS Audio Grandmaster, DS Audio Master1, DS Audio DS-W3 Clearaudio Goldfinger Statement II, Air Tight Opus 1, Ortofon MC Anna, Ortofon MC A90
**Digital source:** MSB Reference DAC, Soulution 760, Berkeley Alpha DAC 2, Kalista DreamPlay X
**Cable and interconnect:** Crystal Cable Art Series Da Vinci, Crystal Cable Ultimate Dream, Synergistic Research SRX
**Power cords:** CrystalConnect Art Series Da Vinci, Crystal Cable Ultimate Dream, Synergistic Research SRX
**Power conditioner:** AudioQuest Niagara 5000, Synergistic Research Galileo Power Cell SX, Technical Brain
**Support systems:** Critical Mass Systems MAXXUM and QXK equipment racks and amp stands and Center Stage 2M footers
**Room Treatments:** Stein Music H2 Harmonizer system, Synergistic Research UEF Acoustic Panels/UEF Acoustic Dot system, Synergistic Research Vibratron SX, Shakti Hallographs (6), A/V Room Services Metu acoustic panels and traps, ASC Tube Traps
**Accessories:** DS Audio ION-001, Stein-Music Pi Carbon Signature record mat, Symposium Isis and Ultra equipment platforms, Symposium Rollerblocks and Fat Padz, Walker Prologue Reference equipment and amp stands, Clearaudio Double Matrix Professional Sonic record cleaner, Synergistic Research RED Quantum fuses, HiFi-Tuning silver/gold fuses

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sidebar interview, where everything (including set-up adjustments) is explained in detail. What I am going to discuss is how those improvements have changed the MBL X-Treme's already sterling sound.

To begin where it is logical to start, the very bottom octave (in my room from below 20Hz to 30Hz) is reproduced with a power, color, clarity, and completeness that I've never before experienced from a loudspeaker, even a loudspeaker coupled to a giant, multi-driver "add-on" sub. I hate to repeat this cliché, but this is something you really do need to hear for yourself to believe. Oh, I've had subs that will rattle the floors and walls, even some speakers that can do this horripilating trick on their own. But in my room, the X-Treme MKIIs clearly and measurably reproduce 16Hz at the same level as they reproduce 1kHz! In my experience, that, folks, is unparalleled low-bass response.

The sonic results, as I started this review by saying, are amazing. It is not often in audio that you hear *entire octaves* that you haven't heard before. With Drake's Rhodes synth on "Hold On, We're Going Home" from Cash Money Records' *Nothing Was the Same* (the very first cut I listened to, as noted), or Howie B's synth and Hammond organ (with Tone Wheel #1) on Robbie Robertson's "I Hear You Paint Houses" from *Sinematic* (UMe), or Jack Antonoff's Moog Model D, Roland Model 6, Yamaha D7, Mellotron M4000D keyboards, and Yamaha F1 upright piano on "NFR" from the Lana Del Rey (whose kinda like the lyrical version of Sarah Silverman) album of the same name (Polydor/Interscope), the 20Hz–60Hz range was reproduced with a power that made my pantlegs flap, my cheeks quiver, my chest thump, and the cushions of the couch I was sitting on flex in and out. It was like having a subway train roar through my room.

However, it wasn't just the pure low-bass sock the MKII stacks were delivering that astonished me; it was also the clarity of pitches in octaves where pitches are almost always blotted, blurred, or outright missing, the uncannily lifelike buildup of timbre and decay, the three-dimensional roundedness, the toe-tapping excitement of rhythm and pace, the resolution of previously unheard instrumental and performance details on things like Pete Warren's plucked and bowed double bass from Jack DeJohnette's *Special Edition* (ECM), or the tam-tam and bass drum from Leon Kirchner's Concerto for Violin, Cello, Ten Winds, and Percussion (Epic).

If all the MKII subs did was supply the bottom octaves with pitch, intensity, timbre, and duration never before experienced, it would be a neat trick to wow the folks in the cheap seats. But, of course, that is not all the MKII sub stacks do. It is not just the lowest bass that is greatly improved in the MKII; it is the entire bass range, including the crossover region between the subs and the *Radialstrahler* woofers, which in radiating area are equivalent to about two 12" woofers per driver (and there are two of them *per side*!).

The smoothness of MBL's sub/radial transition was always impressive, but in the MKII it is audibly more so. Thanks to the woofers' greatly improved dynamic headroom and the analog parametric equalization (as opposed to the outboard digital EQ I had been using with the MKI's sub stacks), there is a continuousness of sonic character between the low end, the midbass, and the lower midrange that makes the entire system sound more "of a piece." The newfound power and superior blend of the subs doesn't just add more "floor" to the presentation (though it does do that); it also adds richer tone color, greater three-dimensionality, and broader, deeper, more room-filling soundstaging to every instrumental or vocal recording right through the midband. Your space and that of the recording venue truly do "unite" in a wall-to-wall-to-floor-to-ceiling fashion that no other speaker, in my experience, is capable of equaling. It is, as I said earlier, as if the ambience and structure of the recording space and that of your listening room are so completely blended that what you hear isn't like a rectangular sonic picture situated between, slightly to the sides, and behind the speakers (beyond which your room and its boundaries are still visible and audible) but an entirely new, all-encompassing, large-scale diorama in which your room's boundaries and your speakers utterly disappear.

Within this unexampled soundstage, instruments are imaged with stunningly lifelike timbre, power, and dimensionality. Thanks to the woofers and the *Radialstrahlers* omnidirectional output, not only is the low, dark timbre of something like David Murray's bass clarinet on *Special Edition* reproduced realistically from starting transient through steady-state tone to decay, so is its hollow columnar shape, which you can very nearly see as well as hear. As I said earlier, this ability to conjure near-visible 3-D images of instruments and instrumentalists replete with lifelike color and power in a soundstage of unmatched size is the chief thing that sets the MBL 101 X-Treme MKII apart from *every* other loudspeaker I've heard. It is what makes them so magical. For months, I've been writing about how gestalt shifts can suddenly turn a collection of musical parts into a near-visible instrumental whole. With the 101 X-Treme MKIIs, that gestalt shift comes as part of the package. You get magical three-dimensionality of image and stage with every recording—and you get it continuously, not on a moment-by-moment basis.

Downsides? Well, first, the MBL 101 X-Treme MKIIs cost a fortune.

Second, though stunning-looking, they are so large and heavy that they will test the

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Third, as with all *Radialstrahlers*, they don't image at centerstage with the sharp-edged definition of direct-radiating loudspeakers. Their images are a bit larger and more rounded at the edges (because more three-dimensional) than those projected by cones in a box. Of course, instruments and voices in life also have this same softer-edged, more voluminous kind of projection—it is one of the chief reasons why music recorded on microphones and played back on stereos sounds different than music heard in a concert hall.

Fourth, because of their imaging, the X-Treme MKIIs may not seem, at first, as minutely detailed as electrostats, planars, or very-high-resolution dynamics. This, however, is an illusion owed to several factors. Because the MBLs deliver the entire dynamic/harmonic envelope with more accurate timbre and duration, starting transients aren't overly emphasized the way they are with cone speakers, whose excess of direct sound, spotlight-like sidewall reflections, and the diffraction, reflection, and ringing of their enclosures in the upper mids and treble tend to goose transients up. This, of course, is not to say that the X-Tremes MKIIs want for speed—just listen to the strings of Hans Theessink's slide guitar on his fabulous cover of "Sympathy for the Devil" from *Jedermann Remixed* (Blue Groove) if you want to experience realistic transient response. What it *does* say is that the X-Treme MKIIs won't give you transients only or predominantly; they will give you the whole note in three dimensions, without laying an extra finger on the pitch, timbre, duration, or intensity of each phase. You're not losing detail with X-Treme MKIIs; on the contrary, you're gaining it. What you're losing are unnatural emphases.

However, this situation is complicated by another factor. In addition to low-bass parameters, MBL follows AES' strictures when it comes to rolling off the upper midrange and treble. The engineering organization recommends a gradual (1.5dB/octave) slope in the top end—to duplicate the way frictional losses affect the highs in musical performances. This deliberately engineered downward-tilting frequency-response curve means that transients in the upper mids and lower treble are, *ipso facto*, going to sound a little less aggressive (and quite a bit more natural) than they do through "flat-on-axis-to-20kHz" dynamic loudspeakers.

Fifth, like their earlier iterations, the 101 X-Treme MKII *Radialstrahler* sections are tough to drive. With a roughly 4-ohm impedance (when bi-amped as MBL recommends) and a conventional anechoic sensitivity in the very low 80s, they are rather like latter-day Apogees. While MBL's superb Reference Series monoblocks (the 9008 A and the 9011) have no problems controlling them, you do need two amps per speaker side to drive the *Radialstrahler* columns (one for the top trio of radial drivers, and another for the bottom). That amounts to four pricey monoblocks (and associated cabling) for the entire system, almost doubling the price of the 101 X-Treme MKIIs. Of course, all pricey speakers are going to require pricey amps; they're just not going to require two sets of pricey amps per speaker side, unless you bi-amp. (I haven't yet tried non-MBL amps with the X-Treme MKIIs, but I'm planning on it. I'll let you know in a follow-up how amplifiers from Soulution and Vitus fare with the MKIIs.)

Sixth, there is the question of (and a misunderstanding about) room size. You might think that an exceedingly large, extremely heavy, six-foot-tall, four-tower, 26-driver loudspeaker would have to be housed and played in a correspondingly huge space, but you'd be wrong. Because they radiate omnidirectionally in both their *Radialstrahler* sections and their sub-bass sections, the 101 X-Tremes MKIIs (like their MKI predecessors) *need* to "see" walls to function in the way they are designed to function. Though you're going to get more of a "nearfield" presentation in smaller spaces (just as you would with a direct radiator), you're not going to cause the Xes any problems when it comes to "driver blend" or room nodes. In fact, I rather prefer the sound of the X-Tremes in rooms (like mine) where the walls are "closer in," as their omni design seems to work more effectively in such spaces. So long as you can seat yourself around ten feet from the *Radialstrahler* towers, the X-Tremes will work exceedingly well in any size room.

Seventh, perhaps more than any other hi-fi component loudspeakers are matters of personal preference (as well as pocketbook). A surprising number of other speakers play—and play extraordinarily well—in the 101 X-Tremes MKIIs' ballpark. For roughly the same money, you can get a Wilson Audio Chronosonic XVX, a Kharma Exquisite Extreme Grand Signature, an AlsyVox Michelangelo, a Stenheim Reference Ultime Three, or an Estelon Extreme Mk II, and, for considerably less, you can get a Magico M6, a Rockport Lyra, a Magneplanar 30.7, a Sound Lab Ultimate-1, and many others. All of which is to say that what I prefer may not be what you prefer. On the other hand, if you're in the market for a speaker that will make Frank Sinatra, Harry Belafonte, Louis Armstrong, Ella Fitzgerald, Diana Krall, Julie London, Miles Davis, Chet Baker, John Coltrane, Ornette Coleman, The Beatles, The Doors, The Band, Drake, Bruno Mars, Janet Baker, Dietrich Fischer-Dieskau, Glenn Gould, Helmut Walcha, the Cleveland Symphony Orchestra, the Juilliard Quartet, and the halls and studios they were recorded in not just fully audible but almost fully visible in three dimensions, you're going to have to audition the 101 X-Treme MKIIs.

Bottom line? I think you already know. The MKI X-Treme was the most realistic-sounding and musically enjoyable loudspeaker I'd heard in my listening room (or anyone else's listening room, for that matter). The MKII version is better. Indeed, it is better enough to more than justify its added cost (and the additional expense of amplifiers and cabling). As I said when I first auditioned it, "I've never heard anything like this before." I'll bet that you haven't, either. This is a phenomenally good loudspeaker. Obviously, it will be my nominee for TAS' annual Overall Product of the Year Award. Had we such an honor, it would be my nominee for Product of the Millennium.

**Are the subwoofers the only things that have changed in the MKII version of the 101 X? I mean the system sounds so different (and so much better) you'd think a great deal else had been improved.**
The only change to the MKII is the bass stack, but as you can hear, if you change the bass, *everything* is changed.

**What are the differences between the MKI and MKII sub stacks? And why did you make these modifications?**
We developed the MKII sub stack because sonic standards have changed. The AES regularly releases recommendations about the energy content in recorded music, and this graph of energy-over-time-and-frequency changes every decade. When I began with MBL there was nearly no recorded energy below 80Hz, so the first MBL 100 only went down to 85Hz, which was sufficient. When the X-Treme was developed in 2007, the AES recorded energy-content graph had been extended to 50Hz. Ten years later, the recommendation for low-bass limits was 20Hz.

Where the maximum low-bass SPLs of the MKI tower was sufficient for recorded music a decade ago, nowadays we have mixes with much more energy in the very low end. So, even though the new subwoofers have the same sensitivity, the same frequency response, and the same phase response as those in the MKI, the new MKII sub stacks can now handle and deliver higher SPLs in the 20–30Hz region. The sub stacks also have much higher dynamic headroom and, of course, the built-in ability to tailor output to your room.

To effect these changes, the drivers had to be redesigned. Though the MKI woofers measure the same at 60 or 80Hz, in the MKIIs there is a difference at 20 to 30Hz. The new woofers have deeper baskets to house bigger magnets and permit the woofer diaphragms to move greater distances (+/-16mm, where the older setup allowed +/-11mm); the ferrite/ceramic magnets (not neodymium which changes its properties with temperature) are also stronger and larger to power this greater range of motion; and, most importantly, the rubber surrounds have been made thicker, heavier, and more stable to allow higher excursions and higher air pressures without deformation. We still have internal force-canceling aluminum rods between the baskets to reduce the transmission of vibration to the cabinet, and we still have Sorbothane damping between the magnets. But the damping mechanism has been improved (since the larger magnets are seated closer to each other, the Sorbothane works more effectively to reduce vibration). The Class D LASA 2.0 amplifier is slightly improved and more powerful (620W versus the original's 480W) and has a switching power supply.

We've also remodeled the cabinets to handle the increased air turbulence caused by the new woofers. Where one 11mm port was more than sufficient for the MKI drivers and for music recorded 10 years ago, in the MKII we have doubled the ports, which are now tuned to 25Hz and driven by dynamically controlled, dual-layer aluminum drivers with Qs of 0.37 (very high control) that are boosted by an auxiliary filter which raises output at 25Hz by 6dB. With rounded throats on the inside and outside, the new dual-port setup optimizes the box for larger air movements, reduces internal turbulence, and converts more energy into music at lower frequencies, audibly increasing dynamic headroom and dynamic ease and allowing the new subs to accommodate the greater number of recordings with 20-to-30Hz content.

Of course, if you want to deliver more deep bass, you must also be able to control this bass. To this end, we use a 1:1 Jensen isolation transformer at the sub stack inputs (both RCA and XLR), which electrically separates the signal path of the subwoofer from the signal path to the *Radialstrahler* woofers. When the subs are tasked with heavy work, the transformer ensures that none of this signal is transmitted or reflected back into the *Radialstrahler* "melons." In addition, the transformer is designed to produce a tape-like harmonic richness in the bottom octaves. The iron core between its first and second windings behaves in a manner similar to the iron oxide coating on tape, which is not optimized for perfect linearity but for highest musicality (technically, it has a little more hysteresis); the transformer gives you the same, enriched, *very* slightly non-linear low-end color, power, texture, rhythms, control, and definition of reel-to-reel tape. (Psychoacoustically, without the transformer the sound would not be as rich and "pacey.")

In addition, our new built-in parametric analog equalization allows the subwoofer to be adjusted to two main frequencies in the Schroeder area (the area below about 200Hz, determined by room size and reverberation time, where your room starts acting like a resonator rather than a reflector), and this helps the subs integrate with the *Radialstrahler*s in the room more seamlessly. Though it's not absolutely necessary to use this feature (a lot depends on the room), it can often be very useful.

Equalization can be set by ear or by measurement, but having this ability does not mean that the bass should be made perfectly flat. In the low end, music typically puts higher energy into any (rectangular) room below the Schroeder frequency than it does above the Schroeder frequency. If, for example, you are listening to a piece with a synth or a five-string bass or an organ or a piano, those instruments may put 6dB more 20–80Hz energy into your room. It would sound musically unnatural to reduce that bass energy by 3dB or to flatten it to 0dB. It will only sound natural (and the speakers will only disappear) if the equalized response of instruments have the same SPLs as any natural source would have *in your room.* (If you have a trapezoidal space with a very low reverberation time, then a flat response in the bass might sound natural.)

In theory, if you improve the bass, you improve the sound of an entire system (even if there is no physical connection between the bass drivers and the mains). Of course, our sub stack is not an "add-on." It was designed as an essential part of a four-way system.

**Tell us about the controls on the new sub stacks.**
We have retained the Level control found on the

MKI, which allows you to adjust the output to your taste or to adjust the gain to match different amps powering the *Radialstrahler* stack. (The twelve o'clock position works neutrally with our 9008 and 9011 amps.) The main Q factor control adjusts the speed or the fullness of the low bass via the auxiliary boost filter. When the Q filter is at the 12 o'clock position, the Q is -3dB (anechoically) at 25Hz; with the control turned all the way up, the Q is 0dB; with it is turned down all the way, the Q is -6dB. The Delay control changes the phase/timing of the subwoofers +/-8ms. In the middle position, the delay is 0ms (equal to the output timing of the *Radialstrahler* melon), but you can electronically "move" the subs forward or backward, depending on the dimensions and structure of your room. If, for instance, you have rigid walls, the sub signal can come in too early, so you can "move" the stack back electrically by adding delay. In a room with flexible walls, the bass can come in too late, so you can "move" it forward by reducing delay. Ideally, you want all the sound to seem to be coming from the melons.

We've had these three main controls before, but we have now added two two-way parametric equalizers. In most domestic listening rooms, you end up with standing waves at one or two frequencies, which can be disturbing. With the two parametric EQ control, you can reduce resonances from 80Hz down by as much as 10dB, thus improving the overall coherence of the system. (What you don't want to do is try to boost notches, which can never be fully "filled in" no matter how much power you feed them, which is why we've limited the boost to 5dB.)

When reducing resonances, it is important to leave a little of their original resonant energy untouched. Otherwise, the sound won't be natural. If, for instance, you have an 8dB bass note and EQ it to be flat, it will sound unnatural because your room still has this 8dB room node, which you hear when you talk or clap or play any kind of music. Completely removing this node will mean that your room no longer sounds like your room. So, I recommend that you leave one-third of a resonance alone. If, for example, you have an 8dB hump, I would reduce it to 2.5dB. Canceling out all resonances to achieve a "flat-line" EQ kills the life of the music.

Both EQ controls also have Q factor adjustments, which let you fine-tune the bandwidth of the cuts. (Rooms with flexible walls need a broader bandwidth; rooms with rigid walls a narrower one.)

For determining EQ parameters, I recommend testing via a microphone in nine different positions around your listening seat and then making an average of the results to decide on adjustments. (Testing from one position simply won't work.) Even if you still have a notch or boost at your listening seat after adjustment, the sound will be much more natural if you average these nine readings. For instance, following these guidelines, in your room I achieved an output level at 16Hz that was exactly equal to the level at 1kHz (0dB difference). Of course, the inherent low-bass room boost of your room was a factor. **tas**

# AVM CS8.3 Black Edition Streaming Integrated Amplifier

## High End Simplified

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**Germany has a reputation for engineering precision**, largely due to its prowess in automobile manufacturing. Major tech companies such as Siemens haven't hurt this reputation, either. As an outsider, you might think this is a country whose values are solely placed on work conducted to the highest standards. But while there's no question that the Germans strive for excellence, they are also a relaxed people. They are not all work; they are family oriented, ethical, punctual for certain, and have a balanced work/life outlook.

Since I've had a good deal of experience with German companies, I have to confess I had some preconceived notions of what to expect from the ambitious AVM CS8.3. Priced at $18,995, the CS8.3 is a 500Wpc (into 4 ohms) integrated amplifier based on a switching power supply, a Class D switching amplifier in the output stage, and a tube linestage coupled with an integrated streamer and CD drive, all in one chassis. One side of me said, "Cool, all that tech integrated into one piece of gear." Fewer boxes can often be a very attractive thing. The other side of me said, "Who in his right mind would try to have a switching power supply, streaming service, and tube topology in the same box?" The ability to filter noise and interference inside one rather small enclosure struck me as an engineering nightmare.

Leave it to the Germans to figure out a way to engineer themselves out of an engineering impossibility.

### Setup and First Impressions

The CS8.3 arrived in a double-cardboard-boxed flight case. It's a beautiful, understated piece with AVM engraved on the top and a window through which to see some of its inner workings. The unit has a simple two-knob/one-window front panel (and several small buttons for controls). Nothing to get overly excited by or about, though the build-quality and precision machining do say "German."

Setup was simple and straightforward. As soon as I got the unit connected (including Ethernet) and powered on, it automatically went into a firmware update. This took probably 10 minutes to complete and required no user interaction. Upon completion, my Roon Core recognized the AVM, and I enabled it. As I set the volume to "fixed" in the Roon Core, I expected volume controls from Roon would be disabled. However, this was not the case. AVM has made the CS8.3 so that when the Roon Core is set to fixed, the Roon volume control actually handles the AVM's volume. This is a really nice feature because the volume buttons on your tablet or smartphone control the volume in 1dB increments.

In addition to the Ethernet connection for streaming, the AVM has one USB, one SPDIF coax, two TosLink optical, one AES/EBU, one pair of RCA, and one pair of XLR inputs. The last connection may be switched to "Home Theater Throughput," a feature of the AVM I really like. It also has a slot for CDs. I was a little disappointed by not having more analog inputs, but this would probably not be an issue for most users. There were certainly enough for me to review the unit properly. There are also two sets of variable analog outputs (one RCA and one XLR) and two sets of digital outputs (one coax and one optical), in addition to the high-level speaker outputs. On the front panel there is also a headphone jack, which was not used in this review.

The CS8.3 does have an infrared receiver, as well as a back-panel input for hex IR codes. However, the unit did not come with a remote. There is an optional one available, the RC3 for basic function, and I was told that future units will include this as standard. (At press time, AVM confirmed that the RC3 is now included as standard.) You can download an app (iOS or Android) to control the unit. The app has some nice features, such as naming your inputs and enabling and disabling inputs. However, using this app for regular control definitely leaves a lot to be desired from a user experience standpoint. Volume

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## Specs & Pricing

**CD drive:** TEAC Pure CD Drive
**Tube linestage:** 12AX7
**Analog inputs:** 1x RCA, 1x XLR
**Analog outputs:** 1x line/fixed-out RCA, 1x variable-out XLR, 1x variable-out RCA
**Digital inputs:** 1x SPDIF coax, 2x SPDIF optical, 1x USB A (stick/HDD), 1x USB B
**Digital outputs:** 1x SPDIF coax, 1x SPDIF optical
**Bluetooth:** HiFi Bluetooth (4.2 standard)
DSD: DSD128 (5.6MHz) via USB B
**Music streaming:** AirPlay, Roon Ready, Spotify Connect, High-res audio/Qobuz /Tidal Connect, UPnP
**Multiroom:** Multiroom & party sync mode with all RC X App-compatible AVM models
**Radio:** Webradio via Airable Internet Radio Station Database (automatic updates)
**Network:** Ethernet (10/100Mbps), Wi-Fi (802.11a/b/g/n/ac) 2.4/5GHz
**Tone controls:** Balance, bass, treble, scalable loudness
**Output power:** 2x 500W [4 ohms]
**Headphone output:** Class-A 6.35mm
**Speaker outputs:** 1 pair
**Dimensions:** 43cm x 13cm x 38cm
**Weight:** 13 kg
**Price:** $18,995

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is not set from the volume keys on the tablet or phone in this application, but only from a slider on the screen. You can tap on the high side or low side to elevate and lower the level, but overall, it is not the most user-friendly approach. To access inputs, you need to press on the AVM icon, whereupon a list of different settings comes up. You then select "inputs," and the various inputs are listed. This type of extra clicks to get where you want to go, when all you really wanted to do was switch from music to TV, can be frustrating. Honestly, it's easier to just get up and turn the dial on the AVM for the source you want and adjust the volume there. Fortunately, after I received the review sample, all units are now shipped with the RC3 remote that is much easier to use and obviates the need to use the app for simple functions.

In my initial setup I tried to use as many of the inputs as possible to see how they worked, more than to listen critically. I was able to log into my Tidal and Qobuz accounts easily. I set up an account for the "Hi-Res Audio" channel and tested it but did not listen critically on this channel. I also tried the USB input with an external drive that contains the FLAC files I use with Roon. Tidal and Qobuz worked well. You get the same user interface that you would expect with each of these services. However, unlike Roon, the volume buttons on the tablet or phone did not operate the volume of the AVM. For this, as I noted, you must use the volume slider at the bottom of the screen. The USB files were the least user friendly. They worked, but it was not a good user experience. The files and folders are shown just like they would be through Windows Explorer. There is no artwork or easy way to navigate or search. Your files are organized on the drive in whatever order you originally set them up. So, if you are looking for a song, but can't remember the artist or album, it could be near impossible to find. If you are using Roon to manage your files, then this is of no concern. I used Roon for the majority of my time with the AVM CS8.3.

Once I started using the unit, I was pleased with its sound from the start. It had come from a dealer who had been using it for demonstrations, so it was already burned in. I was hearing tremendous detail (dare I say precision), but it was also relaxed and not at all fatiguing. This unit uses a combination of tube and solid-state electronics, and first impressions gave the sense that AVM had really done a nice job capturing the strengths of each topology. The detail, finesse, and control were reminiscent of solid-state but without any of the harshness or grain often associated with that gain strategy. What was present was fullness in the midrange and instruments that had a little extra body, which I often associate with tube-based components (and tend to enjoy).

### The AVM Story

This is certainly not the full story, perhaps a Cliff's Notes version, but I had the pleasure of speaking with Udo Besser, the CEO of AVM. AVM stands for Audio Video Manufacturer, but AVM is really an audio company.

Udo began his passion early; at the age of 15 he was given an amplifier and built a system around it. His father was an audiophile and, as Udo described it, "had the large speakers and lots of equipment." He loved classical music. Udo worked at a hi-fi store where he repaired and tweaked various gear. He went on to the University of Munich and studied electronics but also wanted to go beyond the technical aspects and also earned an MBA. Post-graduation, he worked at Burmester for 15 years and became the managing director and part owner. He developed the car-audio line for Porsche and Mercedes.

In 2011, Udo acquired AVM, which was not a new company. AVM was founded by Gunther Mania in 1986, and Gunther remains with the company today. Udo's interest in AVM, beyond it being a formidable brand, was that it had several all-in-one systems. He felt this was the future. Udo recognizes a lot of boxes means you are no longer in the living room—you almost need a dedicated listening

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**Quote**

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room. Incidentally, in 2011 streaming was becoming a reality, and it was, of course, a no-brainer for AVM to incorporate a streaming engine into its single-box solutions.

Speaking of streaming, AVM is Roon Ready and integrated with Tidal, Qobuz, a "Hi-Res Audio" channel, and Spotify for streaming. Spotify? Yes. Udo says we need to welcome youth into this hobby. And youngsters all have Spotify accounts; when they want to "graduate" to better sound, the transition will be easier if the products have the services they already use. I think many high-end companies have stayed away from lower-resolution streaming services because they fear that lower sound quality will give their brands a bad name. Maybe Udo is a bit of a pioneer here, but it strikes me that embracing what the next generation is already using is a smart way to capture new customers.

AVM's mission is a simple one, at least to describe: premium sound at accessible prices through products that can inhabit the living room as part of the family lifestyle. AVM's products are not inexpensive, by any stretch, but they aren't in the stratosphere, either. They also meet some very nice lifestyle requirements by focusing on one-box solutions, most of which incorporate a phonostage, to boot. AVM has even started making turntables with their own arms and cartridges. This all started when Udo's son asked him for a turntable as a graduation present. Rather than buy one, he built one. Today 15% of AVM's revenue comes from its turntable business.

## The Technology

The Black Edition is the highest-level line that AVM offers. The CS8.3 utilizes a tube linestage based on 12AX7s, along with a switching amplifier, sourced from the Danish company Pascal. This combination provides 500Wpc (into 4 ohms) and has ample headroom for just about any speaker. As I mentioned, trying to put all of this in a single box without having inherent noise and interference problems seems like a massive challenge. There were several things AVM could do to isolate sensitive circuitry, particularly the tubes, and still others to reduce the generation of noise in the first place, like using shielding between circuit board layers and then damping interference with various shielding between sections. The tubes are laid out in the corner away from the amplification circuit for this very reason. There was one compromise AVM did have to make: There is no integrated phonostage in this unit. AVM does offer optional outboard phonostages, and I would say that, at this level, that probably makes a lot more sense, anyway.

The streaming engine AVM uses is also its own design and is entirely software based. It only uses a fraction of the processing power available, so it can be upgraded over time with little worry about running out of processing power. The system is designed ground-up for multi-room applications. By the time this article is in print, AVM will have released its "Bridge," which is a multi-room endpoint for any of its streaming systems. The "Bridge" will retail for around $2k, and there is an amplified version as well that will retail for around $2.5k. All the Bridge needs is an Ethernet connection on the same network the main unit is on, though it can also run as a stand-alone streaming device, which will be Roon Ready and accept Tidal, Qobuz and Spotify as well as the "Hi-Res Audio."

## Serious Listening

All my serious listening was either streamed via Tidal or Qobuz (directly and with Roon), or from my own ripped or purchased files on an external USB drive connected to my Roon Core. In my initial listening, I was impressed with how AVM had captured the best of both tube and solid-state electronics. Everything I listened to sounded wonderful on the CS8.3, though as with most high-performing products there were some areas that really stood out as being just a bit better than everything else. I was particularly captivated by acoustic instruments, guitar being the most enticing. Plucked or strummed strings had precision and detail, but the resonance of the body of the guitar was warm and inviting. The guitars really had a three-dimensional character. Two albums are worth mentioning here: Narada's *Masters of Guitar* and the David Grisman and Tony Rice title *Tone Poems*. The first is a compilation of works from Narada's artists. The different guitarists are all well recorded, but recorded in different venues—and this was obvious in listening with the AVM. The second album is two artists playing duets that, I believe, were all recorded in the same venue. But they use different vintage instruments (guitar and mandolin) on different cuts. And this, too, was obvious through the AVM, which brought out the distinctive character of each of the instruments.

I listened to a variety of jazz, vocal jazz, classical, piano, and pop recordings. Because the acoustic recordings came across so well, most of the electronic and pop recordings paled in comparison. This is not to say that they were not reproduced well; it's just that these types of recordings did not benefit as much from the AVM's qualities as their acoustic counterparts. Saxophone recordings were also exceptionally well reproduced with the CS8.3. Again, the transient detail coupled with body and warmth gave the instrument a rich lifelike sound. I listened to several Ben Webster's recordings, my favorite being *Live at the Renaissance*, but all of them sounded terrific. *Jazz at the Pawnshop*, another audiophile favorite with the less than subtle noises from the

crowd mixed in with the music, did not disappoint, either. You just felt like you were sitting in the club.

Moving on to vocals, I listened to a variety of recordings by Anne Bisson, Nina Simone, and Cassandra Wilson, but one that stood out was Jane Monheit's version of "Honey Suckle Rose." It starts with an upright bass playing solo, and then Monheit joins in. Both the bass and her voice had that wonderful three-dimensional character, and the soundstage was remarkably realistic and stable. There was never a waver in instrumental (or vocal) placement. This piece always sounds great, but with the AVM it sounded more lifelike than I was accustomed to.

Large-scale classical was also excellent. The width of the soundstage was impressive and captivating. But as good as large-scale classical was, chamber music was better. Big orchestral recordings just don't have the minute details of a trio or quartet of individual instruments, and resolution is one thing that the AVM truly excelled at. Thus, chamber music, with any combination of instruments, was superb. I find chamber music that includes piano can often be more difficult to capture. Not through the AVM. Schubert's "Trout" Quintet, for example, on Sony Masterworks, featuring Yo-Yo Ma, Emanual Ax, and Edgar Meyer, was a terrific example of just how good the CS8.3 is. There was never a time when I felt that one instrument's character was obscuring another's. They were all delineated within their own space, and each instrument had its own three-dimensional character and was sized appropriately and proportionately.

## Conclusion

Bravo to AVM and Udo Besser for designing and manufacturing such a wonderful all-in-one component. On the surface, it seems quite simple, but from a technical perspective it's quite complex to have this level of execution and convenience in one relatively small box. My only complaint about the system had to do with the ergonomics of the RC X application, which has nothing to do with sound quality. But the recent decision to include the RC3 remote control as standard obviates this shortcoming. Most importantly, the CS8.3's sound quality was outstanding, particularly in the rare quality of presenting detail without fatigue.

Having the AVM in my living room was a pleasure, not only from a sonic standpoint but from a simplicity one. The understated cosmetics made it a good addition to the living area, and it performed with German precision, though that precision never got in the way of the music. I felt AVM extracted the best of tubes and solid-stage electronics. I was always drawn into the music and thoroughly enjoyed my time with the CS8.3 Black Edition. If fewer boxes are of value to you and this unit is within budget, it is a must on the audition list. tas

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# Crystal Cable Reference² Diamond Interconnects and Loudspeaker Cables

## Playing Against Type

Neil Gader

**Like many baby-boom-generation audiophiles, I grew** up in the era of the BIG speaker cable—a period when one's commitment to the hobby was measured by the diameter of a run of speaker wire. There was hardly a thought to its appearance or, shudder the thought, practicality. And if you weren't careful, you were just as likely to trip over them as listen to them. As the high end matured, we found that there were many factors—other than physical scale—that influenced the sonics and musicality of audio cables. Electrical and mechanical properties, the quality of terminations, conductor quality, design formulations and geometry, and, of course, shielding and grounding.

But Crystal Cable's Gabi Rynveld, the CEO and president of this Netherlands firm, sees things a little differently. Her team produces cable and associated products that are (perish the thought) attractive, even jewel-like, more like something found at a Tiffany & Co. counter rather than a shelf at Ace Hardware. Its latest collection, Diamond Series 2, includes the Piccolo² Diamond, Micro², Reference², and Ultra². The Reference2 is the subject of this review, and though by no means budget at $4300/2m, it is still a far cry from Crystal's breathtaking mega-buck Art Series van Gogh and Da Vinci models.

Conductors are Crystal Cable's uniquely developed silver-gold alloy representing, according to Crystal, a first in the industry. The formulation "eliminates microcracks in the silver conductor's crystal boundaries by injecting gold atoms to fill them in." The result is a reduction in boundary distortions and better electrical characteristic than conventional silver conductors alone. They are also more flexible, always a "win" when organizing cables in a system. The solid-core conductors are wrapped in genuine Teflon (no imitators), then Dupont Kapton, then a silver-plated copper shield, and finally an outer transparent Teflon sleeve. Compared with the original Diamond Series, Crystal has targeted RFI rejection with improved insulation and shielding and significantly reduced ground impedance for lower noise.

Since I was going to evaluate these cables through multiple speaker systems including an active one, Crystal Cable's U.S. Distributor Wynn Audio provided two sets of long XLR interconnects as well as single-wire speaker cables and Reference² power cords. The interconnects ran the dCS Bartók streaming DAC (having recently received the factory upgrade to Apex status—more on that in a forthcoming issue) through the Pass Labs XP 12 preamp to the ATC SCM50 active tri-amplified towers. In my other listening room, I used ATC SCM20P passive speaker and Dynaudio Confidence 20 stand-mount compacts (review forthcoming). The sources were the Lumin S1 streaming DAC and my Sota Cosmos Eclipse turntable/SME tonearm. Anchoring the passive system was the Aes-

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**Price:** $4890/2.5m speaker; $2000/1m (+$500 per ½ meter) RCA/XLR
Power Cord, $1250/1m

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thetix Mimas integrated amplifier, a reference piece and Golden Ear Award recipient. My reference cables were the Audience frontRow speaker cables and interconnects and the considerably more expensive Analysis Plus Micro Golden Oval interconnects for the active towers.

In terms of sonic performance, the Ref2 Diamond steadfastly refused to be typecast. In fact, these slender, svelte cables played happily *against* type. Thin, brittle, or bleached? Absolutely not. In fact, tonally Ref2 Diamond conveyed a slightly darker, richer, and more romantic sound, a bit forward but with an element of roundedness in the midrange that lent music a weight and substance that to me was an accurate barometer of the live acoustic experience. For example, the concert grand piano during Kissin's reading of Glinka's "The Lark" felt slightly heavier, thoroughly grounded in its lower octaves. The *fortissimo* upper-treble trills, which ring with harmonics, were piercing but smooth. The tone never hardened, as it captured the velocity as well as the authenticity of the keyboard's felt-wrapped hammers.

Further, the cable was an honest broker across the frequency spectrum. Treble performance was superior without hints of brightness. Bass reproduction was clean, and in most instances, pitch precise and resonant. The Ref2 Diamonds flattered a good recording but also revealed the letdowns of a poor one. Thus, if a record had an edgy or aggressive top end, the Crystal Cable allowed that stridency to play out, come hell or high water. Conversely, an LP recording like Stravinsky's *Pulcinella* [St. Martin in the Fields: Argo]—as airy and extended and natural as any in my collection—was able to fully bloom, even in demanding sections like the piccolo trumpet solo or the amusing duet for trombone and bass violin. An interesting side effect of Ref2 Diamond's strong midrange presence and harmonic density was that John William's "Olympic Fanfare" and soundtrack to *The Cowboys* almost sounded as if their acoustic and ambient worlds was pitched ever so slightly downward and the environment the music occupied had expanded in volume.

Imaging was very strong with little sensation of neighboring images being squeezed or smeared. The attack of the snare during the "Olympic Fanfare" just sat pristinely focused and stable within its environment. On random pop recordings, each drum fill sequence maintained its own place across the soundstage, just as the engineer intended. And there were serendipitous discoveries. I have a recording with a particular flavor of snare drum sound that I *thought* I knew well, but it was not until I listened with the Ref2 Diamond that I noticed the faint high-hat being struck simultaneously with that snare. Of course, it was always there in the mix, but now I was hearing a higher level of individuation. At least some of that credit accrues to the Crystal Cable.

Transients were clean and without overhang. The sibilance range—especially as it relates to vocals—was held nicely in check. Peter, Paul & Mary's Mary Travers' wistful performance of "500 Miles" had good body resonance and took on an almost holographic and physical substance in the listening space—as if you could feel the singer's breath rising from inside her diaphragm and bringing the note to her lips.

But my key takeaway, the area that left me almost (but not quite) speechless was the Crystal's ability to elicit finer and finer gradations of timbral and textural color and contrast. From the opening transient of a bow crossing a violin or cello string or a flat-pick upon the steel strings of a guitar or mandolin, the Ref2 Diamond seemed to capture more character from each note. A good example is Melody Gardot's "Who Will Comfort Me" with its assortment of very specific intro cues from a nylon string guitar and the tactile nature of finger snaps to a terrific muted trumpet solo and the heat of a backing Hammond organ. Another stellar recording that I constantly refer to is Harry Connick, Jr.'s rendition of "A Nightingale Sang in Berkeley Square." Buried in the ambience of this deceptively transparent track was the palpability of the random finger snaps near the close of the tune plus the occasional

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slap of the strings on the fingerboard of the standup acoustic bass. Remarkable too was Branford Marsalis' accompanying tenor sax, which literally harmonizes with Connick's vocal in the closing measures of this track. What makes it special is the instrument's presence and sustain right down to the final exhalation of air flowing over the reed.

Along those same lines many readers familiar with my past reviews know that I can wax at length about how the resolving power of a component can be identified by listening to the distinctive and uniquely gifted voices of background singers in a recording—the backing voices in Norah Jones' "Sinkin' Soon," or the *sha-la-las* during Holly Cole's "Jersey Girl," or Ricki Lee Jones' backing harmony to Lyle Lovett's lead vocal during "North Dakota." All these examples have grown in clarity and naturalism in the years that I've referenced them. Yes, it's partially owing to improved playback equipment, particularly digital sources, but it's also owed to cable like the Refernce2 Diamond that hangs onto to every breath, sibilance, syllable, and sustain.

Switching to the dCS Bartók Apex/Pass Labs/ATC system, I pitted Ref2 Diamond opposite my XLR interconnect reference in this system, Analysis Plus Micro Golden Oval, which as it happens coats its hollow-core copper conductors with gold. In this "gold-vs-gold" matchup, the Ref2 Diamond was impressive overall and only mildly subtractive in the smallest doses. Take, for example the bouncy opening bass vamp from the Holly Cole Trio cover of "I Can See Clearly." In this track, the acoustic bass lost a little control and tension. Nor was the soundstage relationship between bass and piano quite as complex or discernable. During Vaughn-Williams *The Wasps: Overture* (Andre Previn conducting the LSO, a personal well-worn favorite), the Crystal gave up some ground as regards the depth and detail of orchestral layering and the spread of images from section to section. With its richer micro-dynamic energy, the Analysis Plus seemed to draw a shade more raw, heart-rending emotion out of Ronstadt's soaring vocal on "The Moon is a Harsh Mistress." However, in most other aspects like overall tonal balance, transient attack, and midrange verisimilitude, the Crystal was a virtual dead heat with leading contenders like the Audience and Analysis Plus.

Yes, the Crystal Cable Reference² Diamond is slender, lightweight, and easy to handle. But as this evaluation played out, the cable's look was the least significant aspect of the equation, which is why I often remind myself not to be too quick to judge. And perhaps the true strength of Reference² Diamond is that you can have it both ways—the external beauty as well the inner beast, the sonic brawn and intense, uncolored musicality to bring out the full potential of your system. tas

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# AudioQuest Niagara 3000 Low-Z Power/Noise Dissipation System

## Clean and Pure, Inside and Out

Muse Kastanovich

**Before I'd gotten too deeply into the high-end audio** game in the 90s (didn't even use premium power cords back then), I was inspired to get a power conditioner by an article in another publication by my favorite audio writer at the time, Corey Greenberg. He was quite young, like me, and something of an iconoclast. (Another brief article of his, "It Don't Mean a Thing If It Ain't Got That Schwing," should be required reading for audiophiles.) He was reviewing some AC power-line conditioners from different manufacturers and brought a great anecdote into the review's introduction. One night he was trying to get delicious-tasting lemonade at a film theater. Through experiments with an employee, they found that only by using clean, pure water to start with could they make good lemonade. Even more true today than 30 years ago, you can't get truly great sound coming out of your speakers without clean, pure AC power to start with.

AudioQuest's more scientific take on making lemonade is that AC power is "technology that was certainly never meant to power the sophisticated analog and digital circuits used in today's premium audio/video systems. To properly accommodate the promise of today's ever-increasing bandwidth and dynamic range, we must achieve extraordinarily low noise across a very wide range of frequencies."

While we are on the scientific side, what exactly is a "Low-Z Power/Noise Dissipation System"? The short answer is that it is an upscale AC power conditioner/surge protector. "Low-Z" means low measured impedance, which is the combination of electrical resistance, capacitance, and inductance that determines how a passive cable or component alters the AC signals flowing through them. In most cases, high-Z would be bad; it could reduce the amplitude of the AC wave itself, reducing the ability of amps to reach full output or to respond to musical transients with fidelity. It could also run hot, wasting electricity. (The Niagara 3000 runs quite cool.) Ideally, you want to filter noise without holding back the mains' sine-wave of AC power at a frequency of 60Hz.

AudioQuest has even gone one better on this. It claims that the Niagara 3000 not only doesn't limit current but that the two High-Current outlets can also provide what it calls "Transient Power Correction" (TPC). For a very brief period (up to 25mS), these outlets can provide up to 55A peak current for power amps/integrated amps/subwoofers, so that the voltage does not sag when they need it. Conventional Class A/B or Class D power amps can modulate the AC line as they draw more current during musical peaks, which can be bad for dynamics. My Stamina Class A integrated amps draw the same current (~1.5A each) from the Niagara 3000 continuously, regardless of signal level. Sorry AudioQuest, those don't test your TPC abilities! However, I did some listening with the excellent AGD Alto and Tempo amp combination, which is Class D (see my review in Issue 338), and it sounded great with this conditioner. I can't be sure exactly how much TPC was being used, but the Niagara 3000 made a major upgrade to the sound of these amps and to the black silence of their background.

### Over the Falls

Before we dive into the listening, let's look at which Niagara you need for your system. The Niagara series includes four models starting at $1595 for the Niagara 1200, which I have had in my system for two years now and which sounds great. Online, I saw a special for a Niagara 1200/NRG-Y3 package (normally they come with no power cable) for around $1000. So, no one with a system worth $6k or more has any excuse not to get Niagara-level power-conditioning technology. AudioQuest does offer the considerably less expensive PowerQuest Series, though it is better suited for entry-level systems. When you step up to the Niagara 3000 from the 1200, you get two more octaves of Level-X, differential-mode noise-filtering, one more bank of ground-noise dissipation (for a total of three), and two of the high-current TPC outlets (none in the 1200). The 1200

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## Specs & Pricing

**AC Outlets:** Source (5); high-current (2)
**Maximum input current:** 15 amps (RMS)
**Dimensions:** 17.5" x 3.45" x 15.2"
**Weight:** 28.9 lbs.
**Price:** $3900

**Associated Equipment**
**Sources:** Cambridge Audio CXN v2 streamer/DAC, or CXC CD transport with DacMagic 200m DAC (streaming from optical ethernet link with Sonore opticalModule Deluxe)
**Integrated amps:** STAMINA single-ended, Class A, MOS-FET monoblocks; Cambridge Audio CXA81; Bluesound Powernode Gen 3
**Preamp/power amp:** AGD Alto and Tempo
**Loudspeakers:** Paradigm Founder 80f, Paradigm Premier 800f
**Digital cables:** AudioQuest Vodka and Cinnamon Ethernet and Coffee SPDIF, Shunyata Research Alpha V2 and Delta V2 Ethernet
**Analog cables:** Interconnects: AudioQuest Mackenzie and Yukon XLR and RCA, Shunyata Delta V2 RCA, Kimber Hero RCA; speaker: AudioQuest Rocket 88, Shunyata Delta V2, and Alpha Core Goertz MI 2T (all bi-wire) A/C power: AudioQuest NRG-Z3, NRG-Y3, Blizzard, and Thunder cables; Shunyata Venom NR-V10 and NR-V12 cables; AudioQuest Niagara 1200 conditioner; isolation transformers for network gear

has two high-current outlets optimized for amplifiers, but lacks the current reservoir found in the 3000, 5000, and 7000. The 3000 also has a bigger and fancier chassis, though the little 1200 is quite attractive, too. I had been using the 1200 "face-down" behind my rack, with the outlets pointing up, and indeed it was designed to facilitate this. The 3000 could be used this way also, but it is so deep that it would be in much greater danger of tipping over, and the front panel is such a gorgeous gunmetal-shade of polished chrome that I didn't want to hide it on the floor.

As for moving up from the 3000, you can expect the same sonic benefits and more in the pricier models. The Niagara 5000 costs $5900, adds common-mode filtering, two more octaves of differential filtering, doubles the banks of ground-noise filtering, and has greater peak current from TPC on the high-current outlets (90A). There are also nearly twice as many outlets, 12 total, so those with big complex systems might want to spring for the 5000 or 7000. The 7000 costs $11,000, adds four more octaves of common-mode filtering, and two Patented DBS Symmetrical power-isolation transformers feeding all source outlets.

### Enjoy the Silence

Was I blown away by the sound when I replaced the Niagara 1200 with the 3000 in my system? No, not right away. There are a few reasons for this. One, the 1200 uses some of the same noise-reduction tech as the higher-priced models, so I was already accustomed to the wonderful performance it delivers. Also, as AudioQuest preaches, noise dissipation is a holistic process. It takes an entire system of power conditioner and cables to achieve it the way AudioQuest has designed it. So, the greatest benefits of upgrading to the 3000 were especially noticed when I also changed some of the cables to the Blizzard and Thunder. I also must shamefully admit that in some ways the new sound of the music without high-frequency noise riding on the signal sounded "wrong" to me. It took a while to adjust to the purer, smoother, more natural, and more realistic sound with the Niagara 3000. But yes, ultimately it was a significant upgrade from the sound with the 1200.

My Stamina amps pass on more signal than usual, so they sound a bit bright in the absolute sense. (The Stamina is an ultra-simple single-ended-MOSFET design with less filtering, no transformers, almost no wire, and no circuit boards, etc.) Normally, they do not match well with certain interconnects and speaker cables because of their simplicity. Well, the Niagara 3000, the Blizzard, and the Thunder changed all that. By "bright" I mean frequency peaks in the 2kHz–20kHz range (though I can't hear any higher than 15kHz nowadays). I was surprised by the way the Niagara and AudioQuest power cables seemed to smooth the tonal balance for the better.

Then came another surprise. I put in the AQ Vodka Ethernet cable, and it somehow perfectly complemented the AQ Yukon interconnects, with a mellowness in the treble that completely canceled out the slight apparent forwardness in the Yukon's top end. This whole system of Thunder, Niagara 3000, Blizzard, Yukon, and Vodka now sounded incredibly liquid. It was as if they were made for each other (which they actually were). Phenomenal smoothness, incredibly low noise. The whole system, which I know to be a touch

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bright and a little too analytical and strident at times, now had a special midrange glow the likes of which could normally be associated with analog sound or tubes—none of which were part of my system. I had to keep putting on one album after another to make sure I wasn't just hearing a lucky accident, where the sound of the system/cables was matching with the balance on the recording. Nope, every single one had the same wonderful qualities.

But then, I had been paying close attention to all the sonic components and the overall balance of the New Mexico Philharmonic Orchestra in rehearsal. My choir, Coro Lux, would be performing Handel's *Messiah* with them, and I noticed there was a lot of high-frequency content in live sound. So, for my system I judged the Vodka Ethernet too much of a good thing and went back to the Shunyata Delta V2 Ethernet. The final configuration that was best for my system was Thunder, Niagara 3000, Blizzard (to CXN v2), NRG-Z3 (to Stamina), Yukon, Delta V2, and Goertz MI-2T, though it was a touch too polite and filtered until I moved the NRG-Z3 for the Stamina back to the high-current TPC outlets. Even though my amps' current draw shouldn't change with signal level because they are Class A in operation, the high-current outlets sounded better. Go figure. AudioQuest's Garth Powell explained that although Class A amplifiers have the fewest issues with current compression when compared with Class AB and particularly Class D, the power supply in a Class A amplifier is still modulated on musical transients, which is why the transient current reservoir and impedance buffer helps.

To put the differences in stark contrast, I did close-in-time listening, starting with my old (90s vintage) Audioprism Power Foundation III power conditioner, using the same final cable configuration from the previous paragraph. I queued up Simple Minds' "Street Fighting Years" (Qobuz 16/44)—the tracks which were recorded live in Verona. They have that amazingly huge, natural reverb from the hall. Switching to the AudioQuest Niagara 1200 made subjectively large improvements. The upper treble/top octave was no longer too "hot," the bass was more solid, and the sense of space was far more expansive. Not only was the presentation less noisy, there was now a lack of grain, which had been so prevalent with the older conditioner that it made high-res tracks sound like they were only 16/44. Then I switched to the Niagara 3000, and the soundstage was larger and more three-dimensional, and the bass extended even deeper. The overall sound was quieter, less bright, and instrumental and vocal timbres were more natural, especially Jim Kerr's voice—significant, if subtle, improvements to the overall presentation. Very nicely done AudioQuest. tas

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# CAD GC1.1 and GC-R Reference Ground Control

## The Sound of Silence

Jacob Heilbrunn

**For over a decade my mantra has been to get** grounded. No, I'm not talking about tamping down my boisterous personality, though room for improvement doubtless exists. I'm referring instead to my audio system, which features a passel of equipment that functions nice and quietly. In my first home, I went to some lengths to improve the ground, installing a separate, ionic earthing array, copper grounding rod for the subpanel that was tied to the main ground. The idea was to lower the noise floor in my audio system by reducing the ground resistance to as close to zero ohms as possible. Near as I could tell, it worked. In my current home, I encased several hundred feet of copper wire in the laundry room in a substance called bentonite and tied it to the main breaker panel. In addition, I installed a heavy-duty Equitech transformer to deliver balanced power to the dedicated outlets for my stereo.

Is there any further to go? My dream would be to obtain a separate transformer from the power company for my stereo, but that doesn't appear to be happening any time soon. A more practical approach is to try and improve ground performance with audio equipment, and that is what a number of companies are trying to do. In the past several years, high-end companies, including Nordost, Shunyata, and Entreq have designed ground-control devices to lower hash and noise in audio equipment.

Here we consider Computer Audio Design, a British-based company that has begun to attract considerable attention for its ground-control products, beginning with the company's launch of the GC1 at the 2016 Munich show. CAD has been in business since 2011, making DACs, servers, and USB cables. It was this development effort that led to the understanding of the problematic role of noise in an audio system and how to mitigate it. Computer Audio Design is headed by Scott Berry, who holds a degree in electrical engineering, and his vivacious wife Isabel Whitley. CAD, which was founded in 2011, offers a wide range of passive ground-control devices, ranging from the diminutive GC1.1, which has two 4mm banana sockets on its rear, to the mighty GC-R, which has eight. In each case, you run a wire from the CAD into an unused input of a piece of audio gear. The devices are simplicity themselves to use, as they are not plugged into a wall socket but purely passive in operation. Berry was eager for me to try both the GC1.1 and the GC-R, both of which I ran with separate wires to both earth and signal ground.

He explained that his interest in designing the ground controls stemmed from his earlier work in designing digital-to-analog converters. He was obsessed with reducing high-frequency noise, which he felt damaged the signal and prevented digital from attaining some of the attributes of analog recordings. The aim of his ground-control devices is to convert high-frequency noise into heat—another way of looking at it is that the box acts as a sink into which that noise is drained away. The aim is to separate signal from chassis earth ground. The company suggests separating

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*---Andre Jennings, The Absolute Sound, Issue 342*

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## Specs & Pricing

**GC1.1**
**Number of ground jacks:** 2
**Weight:** 10.25 lbs.
**Dimensions:** 12.625" x 4.37" X 3.5"
**Price** $2250

**GC-R**
**Number of ground jacks:** 10
**Weight:** 110 lbs.
**Dimensions**: 18.5" x 16" x 9.25"
**Price:** $29,500

**Standard Ground Control Cables:** $350 each (56" length) in RCA, male XLR, female XLR, BNC, USB, banana, 4mm spade, and RJ45. Custom termination and lengths are available on request.

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ground controls on digital and analog devices, which is to say it recommends against mingling the two on a single CAD device.

The intensely cerebral Berry is confident about his products, but not braggadocious. "You're not going to get 100 percent effectiveness," he said, "but the larger the device, the more effective it will be." Like not a few manufacturers, he's reluctant to divulge the details of his devices, other than to say that "we've gotten together some materials that are man-made. They've been modified and work in different frequency spectrums." CAD has also put considerable work into the slender and fairly flexible cables that run from a piece of audio gear to its grounding device. "We try to get the voltage potential of the connected component to migrate down that cable," Berry says. "We want the very same voltage potential that is in the unit to be inside the GC."

Deploying the units in my system turned out to be a head-snapping experience. It wasn't that the ground control units suddenly excavated lots of new detail or revealed hidden tonalities. Instead, it was the manner in which the overall presentation was audibly different and, in most ways, improved that captured my attention. My audio buddies who listened were riveted, as well. All of a sudden, Maurice Andre's piccolo trumpet, for example, sounded even warmer and more golden.

What the heck was going on? Quite a bit, as it turned out. The most notable attributes were a richer tonality and blacker backgrounds, all of which I ascribed to a reduction in grain and hash. Let's face it: The quieter the background, the more the music emerges from your loudspeakers rather than being hurled at you. On Prince Royce's album *Alter Ego*, the CAD gear noticeably calmed down what was otherwise a frenetic proceeding. The same for the trumpeter Arturo Sandoval's recordings, which rocket into the stratosphere almost the second he picks up a horn. Then there was James Blake's album *Friends That Break Your Heart*. On songs such as "Famous Last Words" or "Say What You Will," the plaintive character of his singing, the emotional depth, the sheer plangency came through even more forcefully. Nor was this all. The extra dollop of blackness that the CAD imparts seemed to widen the soundstage, creating an even more expansive vista than had previously emanated from the Wilson WAMM loudspeakers. This increased sense of spatiality helped situate the instruments more firmly in the soundstage.

Something similar happened when listening to classical piano recordings. The more sumptuous sound was all to the good, particularly on digital recordings, which can sometimes be plagued by an almost vestigial sense of steeliness. Recently, I've been streaming the legendary pianist Murray Perahia's performance of the "Moonlight" sonata, a warhorse if there ever was one. But in Perahia's hands, it takes on a new sense of drama, one that the CAD heightened with its ability to deliver a more pellucid sense of the individual lines that Perahia seeks to bring to the fore. In a sense, you could call it the Marie Kondo of high-end audio: the CAD declutters the music.

I hasten to add that I did not deploy the CAD solely on digital sources. I also wired up the mighty DS Audio Grand Master optical cartridge with a GC1.1 to see what would occur. Once more, I was pleased with the results. While I wouldn't say that it was as significant as with digital sources, I did feel that on LPs such as Michael Jackson's *Thriller*, it definitely helped to render the musical lines more intelligible, reducing any lingering sense of smear or stridency or aggressiveness in the treble region. It was—dare I say it?—a thrilling experience.

The one area where I felt the CAD devices left a more ambiguous imprint on the music was in the realm of dynamics. The velvety sound that it creates also appeared to mute some of the dynamic wallop that was otherwise present on a variety of recordings. Whether this amounts to a subliminal craving for some of the aggressiveness that distortion may create is something I can only speculate about. But in listening extensively to the CAD, I could not help feeling that something of a trade-off was taking place in this area—a smoother but less punchy overall sound.

If you're a congenital skeptic, you'll think that the whole grounding enterprise is a solution in search of a problem. But to my ears there was no gainsaying the remarkable benefits that the devices can confer. Even just plugging in a single GC1.1 on the digital end was remarkably effective. For anyone thinking about venturing into the realm of ground control, I would suggest trying a GC1 to see how you like it. The difference won't be subtle. In my case, listening to the effect of the CAD devices prompted thoughts of David Bowie singing, "Ground Control to Major Tom/You've made the grade." Upon inserting the CAD into your system, you may well feel the same way. tas

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Jonathan Valin, The Absolute Sound. Golden Ear Awards 2022

Outwardly simple, even plain, the speakers in Stenheim's Alumine line are (as JV so eloquently notes) capable of astonishing musical performance. That performance is no accident.

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# Manufacturer Comments

## MBL 101 X-Treme MKII Loudspeaker

Our sincere thanks to JV and TAS for the interesting, exciting, and informative review, following the evolution of the MBL *Radiastrahler* technology generally, and here with the 101 X-Treme MKII specifically. We feel the article is very accurate from the technical standpoint and easy to read and comprehend.

**Jeremy Bryan**
**MBL USA**

## Zanden 1200 Signature Phonostage

We would like to thank Andre for a thorough and thoughtful review. We would like to make a few points regarding the features and functions of the unit.

Nearly all Zanden products include an absolute-phase switch allowing users to select "normal" or "reverse" settings. The primary reason for the inclusion of such a feature is the history of the balanced XLR connector and its use in professional recording. The balanced XLR connector has been subject to different wiring conventions over time. The current "standard" specifies pin 2 positive and pin 3 return. However, Ampex, which was the leading manufacturer of tape-recording equipment, and other U.S. companies used a pin 2 return and pin 3 positive convention. The result is that many recordings will unintentionally have their polarity inverted when played on modern equipment.

Zanden diverges from conventional wisdom by disputing the adoption of RIAA EQ as the recording industry standard in 1954. Prior to 1954, there was a plethora of EQ characteristics used in the manufacture of mono records, and the major record labels manufactured not only records but also the audio systems necessary to play them. The owner of Zanden, Kazutoshi Yamada, initially accepted the notion that LP records adhered to the "RIAA standard." However, one of Zanden's first commercial products was a mono phono equalizer with separate settings for turn-over and roll-off, allowing the user to accurately set the EQ characteristics for all mono records. This unit was a critical reference when Mr. Yamada focused his attention on stereo playback and was dissatisfied with the results. He could not help but notice similarities to mono records played with incorrect EQ. He eventually confirmed his theory by playing numerous stereo LP records using (2) mono phono equalizers and found many original stereo LPs benefitted from alternate EQ settings. Through extensive research, Zanden believes most LP records can be categorized into one of the five basic settings on the 1200S.

One should also be aware that making a shift in EQ curve setting from RIAA will not only change the EQ itself but also slightly change the output level (relative to 1kHz) by roughly a dB or two; for direct comparative purposes, the alternate EQ curves have relatively higher output than RIAA EQ.

Equalization is a filtering process. Filters are utilized both during vinyl mastering as well as playback, and they must be exact opposites to achieve flat frequency response and linear phase. For people who are skeptical of the utility of non-RIAA EQ settings we propose a simple question: Are you completely satisfied with your analog playback, and does it sound natural? Only one EQ setting can be correct, yielding both flat frequency response and linear phase. Other EQ settings will not only cause deviation from flat frequency response but more importantly generate phase anomalies. The time component of music, linear phase, is the most fundamental characteristic of accurate music playback and conveys coherence and realism. On a given recording, the tonal balance will vary with each EQ setting. However, non-linear phase causes smearing of the musical presentation, and our perception of it is similar regardless of setting: an artificial, diffuse soundstage lacking proper spatial cues and the disembodiment of instruments and musicians. Only the correct setting can reproduce a natural tonal balance, as well as accurate spatial information characterized by focus and palpability.

**Eric Pheils**
**Zanden**

## AVM CS8.3 Black Edition All-in-One

The mission of the AVM all-in-one units is simply described as: Let the music return to the living room, making it a social and emotional experience for the family. That being said, the music enthusiast should be the center of attention, and that is what we are able to offer. We have put huge efforts into developing and maintaining a sonic signature that can be found in all our AVM components. There are more components to discover: media players, preamps with streaming, power amps, phonostages, and turntables to build onwards from the all-in-ones, all capable of accommodating multi-room and complete systems. Also, the finishes are your choice: silver or black or, for an upcharge, the striking Cellini finish with a shiny chrome front plate. Custom finishes are also possible.

The RCX is undergoing constant updates and upgrades, adding new features, improving usability, and more. The modular hardware design makes the Ovation Line units (CS 8.3) future-proof; it enables us to add the newest future technologies (i.e., a new DAC), keeping your CS 8.3 up to date and protecting a large investment long term.

**Udo Besser**
**Managing Director, AVM**

## Harbeth C7ES-3 XD and Monitor 40.3 XD Loudspeakers

What a pleasure it is to work with two of the most professional and astute reviewers in the audio industry. We offer our thanks and great appreciation to Robert Harley (editor-in-chief and guiding light) and Paul Seydor (senior writer), who left no stone unturned in his listening and research into the heart and soul of what makes the latest Harbeth offerings so special.

After 21 years of representing this product line, we have come to some of the same conclusions…its Harpeth's Alan Shaw working his magic with CAD crossover technologies combined with his latest proprietary RADIAL driver formula in pursuit of the ultimate in seamless midrange resolution. All while keeping his products affordable to the vast majority of music lovers everywhere. He is always burning the midnight candle…so we predict more exciting developments in 2024.

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Chris Strachwitz at Down Home Music store for his 88th birthday, July 1, 2019.

# Chris Strachwitz:
## July 1, 1931–May 5, 2023

### How A Small Label Helped Preserve and Foster Music

Larry Kelp

**In my 15 years as the *Oakland Tribune* music critic,** as well as 30 years hosting a radio program on Berkeley's KPFA-FM, and even a stint working at his Down Home Music record store, Chris Strachwitz was an important part not only of my profession and musical experience but of my life. Most of what follows are my impressions of Chris, and quotes culled from 40 years of interviews.

You know Chris Strachwitz's recordings even if you've never heard of him. He's been one of the major players in my musical life: The man who devoted his life to recording the music he loved, who put Louisiana Cajun and zydeco, Tex-Mex varieties (from conjunto to Norteño to corridos), Texas blues, the klezmer revival, and more recently Sacred Steel (gospel where steel guitars replace pianos and organs) on the map, not just in the United States but around the world. And today all of his hundreds of recordings are overseen by the Smithsonian Institution. For his work bringing to light great but unheralded American music, in 2016 Strachwitz received the Grammy Awards' prestigious Trustees Award, and in 2000 Strachwitz became the first non-artist to receive the National Endowment for the Arts Fellowship.

Strachwitz died at the age of 91 from congestive heart failure at a care facility in San Rafael. He was always active, always traveling to find musicians, but in that last week he was bedridden, as friends came to visit and musicians played for him. One group included members of San Pablo's Mexican-American band Los Cenzontles (whose first album was issued on Arhoolie when they were children) with Linda Ronstadt and huasteco violinist Nesta Velasquez. On his last day the New Orleans Jazz and Heritage Festival held a tribute and panel discussion about him, with Strachwitz listening on Zoom. He died later that night.

He didn't have his recording studio; it was wherever he found the musicians; with his portable reel-to-reel recorder and one microphone he captured sound on front porches, in beer halls, at music festivals, and occasionally in his Berkeley living room with a microphone hung from the ceiling light fixture. In 60 years he issued more than 400 albums on his Arhoolie Records label, some Grammy Award winners, many responsible for putting not just regional musicians but their cultures into the world. He was not a high-end audio aficionado, but the sounds on his recordings burst with life. We often gets the sense that we're in the same room with the musicians.

**He was not a high-end audio aficionado, but the sounds on his recordings burst with life. We often get the sense that we're in the same room with the musicians.**

Strachwitz was averse to commercial sounds, what he called "mouse music," and his put-downs of pop music are legendary, but more often he was smiling or laughing about all the music he considered himself blessed to have discovered and issued on his label. "Almost more fun than

Flaco Jiménez at Farnham, U.K.,1985.
Photo by Tony Rees

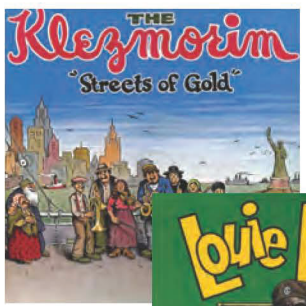
anything else was meeting such incredible individuals," Strachwitz said in the film about him, *This Ain't No Mouse Music*. "And they were all such personalities. That was almost as fun as catching the songs."

"Since I never had a family, those records are my babies. They're much easier to handle and they don't talk back to you!" No family? Watch the 2013 documentary film, *This Ain't No Mouse Music*, made by Les Blank collaborators Maureen Gosling and Chris Simon, and in scene after scene Strachwitz is in the middle of families and communities, and they will all testify that he is the one who put them on the map.

"I don't avoid commercial music by design," Strachwitz once told me, "but most commercial music by its nature is removed from what the musician had in him. I'm trying to bring that out. I don't think another country has such a variety of great cultures as the United States. But most gringos don't know Mexican music and can't tell a mariachi from a conjunto. Most people don't care about anything but the superstars."

Chris Strachwitz was born in 1931 into a well-off family in rural Germany, who split up and fled to the United States as Russian troops advance on their region in February 1945. Staying with an aunt in Reno, having to learn English, he felt outcast in a strange land. He connected with the radio, especially rural blues, songs from a Mexican radio station out of Oxnard, and the teen hillbilly band Maddox Brothers and Rose (Dust Bowl refugees who settled in California) broadcasting live from a Stockton station. In high school he saw a movie, *New Orleans* (1947), starring Louis Armstrong and Billie Holiday. "That was the music of paradise! Jazz, blues, and hillbilly all spoke to me," made by musicians who like him, felt removed from American society. "New Orleans jazz was my first love, but everyone was recording that. The same wasn't true of the blues, though."

"I'm glad when I was a kid I quit collecting stamps and switched to records," Strachwitz said. "Record collecting is like any other addiction. At least it makes you feel good and it doesn't hurt you. In fact, it's probably kept me in shape, moving all these boxes of 78s." His record collecting at an early age led to wanting to record the music that moved him, that was ignored by the big record companies. After earning a bachelor's degree in political science at Cal Berkeley and two years in the Army, he taught German in Los Gatos High School. He bought a portable tape recorder and on summer vacation in 1960 headed with blues fanatic Mack McCormick to Houston, Texas, hoping to record his hero Lightning Hopkins. It didn't work out that trip (Hopkins later recorded many Arhoolie albums), but, relying on just walking up to locals and asking where to find blues musicians, he was pointed to Mance Lipscomb, driving a tractor in Navasota. Invited to Lipscomb's home, Strachwitz got out his recorder and set it up in the living room, resulting in Arhoolie 1001, Mance Lipscomb's *Texas Sharecropper and Songster*. "That Mance record came out in November of 1960. I've still got the invoice. I picked up the 250 LP discs from the trucking company, then Wayne Pope (art director for many of the Arhoolie covers) and his family and I sat in my living room and put the records into the



Mississippi Fred McDowell 1960.
Photo by Lae Friedlander

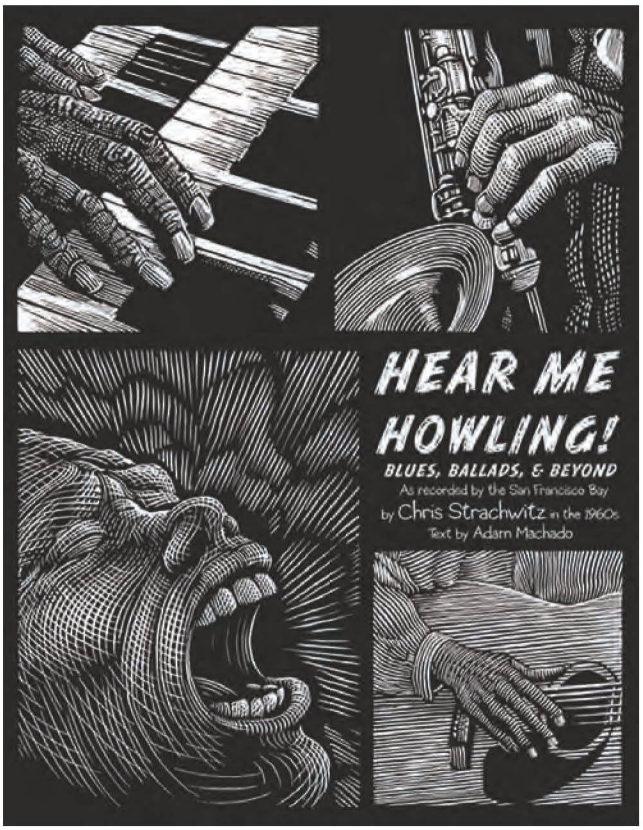
cardboard jackets. The cover art was done on gummed label stock, so we got out wet sponges and stuck them to the jackets."

For many of his recordings, Strachwitz took photos for the album covers, then wrote the liner notes filled with cultural and historical background not available elsewhere. Coming in November is the book *Arhoolie Records Down Home Music: The Stories and Photographs of Chris Strachwitz*.

Let's go to the 1970 Berkeley Blues Festival on the University of California at Berkeley campus, where Big Mama Thornton was belting out the songs she was best-known for, "Hound Dog" (she first recorded it in 1952), and the one Strachwitz issued on Arhoolie: "Ball and Chain." She yelled at the ineptness of her pickup blues band, and later punched out the student promoter because he handed her a check when she demanded cash. Strachwitz was there to record it, but it went unheard until it was included on the Grammy Award-winning 2010 four-CD book set *Hear Me Howling!*, a collection of unissued Strachwitz home recordings by everyone from the Rev. Gary Davis and Skip James to the first recordings of Joy of Cooking, as well as that 1965 Country Joe & the Fish recording, "I-Feel-Like-I'm-Fixin'-to-Die Rag." But back to Big Mama Thornton: that band may have sucked, but try to find a better recording of her singing her "Ball and Chain." It is both nuanced and powerful and drenched in pain. Janis Joplin heard her do it a few years before, and it became the bedrock of that Big Brother and the Holding Company album *Cheap Thrills* (with cover art by R. Crumb, who also did covers for some of the Arhoolie releases).

Strachwitz had met Thornton earlier. "I was visiting (Oakland blues producer) Bob Geddins, and there was this creature on the sofa, a huge lump of heavy clothes. Turned out it was Big Mama. I didn't have a pot to piss in in those days; I was a poor schoolteacher scrounging. And she didn't have a band. I wanted to record her with a good band. Gatemouth Brown came to town, but by then she'd moved to L.A. I had to be a detective in those days. I went to a park and there was a table with a bunch of people playing cards, and she bangs the end of a pistol, 'Hey, Chris, howya doin'!' She did have a gun, but she was always the sweetest person, she'd give anything away but she was also being taken advantage of by everyone. When she came back up, and I got her together with the Muddy Waters Blues Band, they were playing the Berkeley Blues Festival." Strachwitz took them to a studio to rehearse, where she and Waters' pianist Otis Spann worked out some amazing arrangements with James Cotton on harmonica, and out came one of Thornton's greatest albums.

In future trips Strachwitz did record Hopkins, who then sent him to see his cousin, Clifton Chenier. Strachwitz couldn't believe his ears, a black man with an accordion playing the blues and singing in French patois, accompanied by a washboard player. Not even a stage in this beer hall, but the music was a revelation that led to Chenier recording for Strachwitz—but not without a struggle. Chenier, later crowned the King of Zydeco, had visions of rock stardom, playing amped-up blues. But Strachwitz wanted the zydeco, so he recorded an album and one side is the blues, the other Chenier singing in French. And that's what started to get attention, and soon Chenier was performing at festivals across the country, and in Europe.




Where Chenier's zydeco was Louisiana Creole roots on accordion with rubboard, the French Cajun music was accordion with fiddle, and a longer history. Strachwitz, who had already started a reissue label (Old Timey) to put out the roots of Louisiana Cajun music from the 20s and 30s, met and recorded young musicians who became the stars of Cajun music, especially fiddler Michael Doucet (whose band Beausoleil is a globe-trotting favorite) and accordionist Marc Savoy. Doucet heard that Arhoolie issue of long out-of-print Cajun recordings, and said, "This was not available to us before, and was the fuel my generation needed to hear about our culture." With Strachwitz's urging, the two musicians teamed up along with Marc's wife Ann Savoy to form the Savoy-Doucet Band. Today the Savoy offspring lead their own bands, and Ann has written the definitive book on Cajun music. Richard Thompson said, "It's American regional music, and if it weren't for people like Chris we wouldn't know about it." Instead, Lipscomb, Hopkins, Mississippi Fred McDowell, Big Mama Thornton, and others spent the last years of their lives in the spotlight, playing festivals here and in Europe, and getting regular royalty checks from Strachwitz for the Arhoolie albums they sold. Strachwitz learned early on that song publishing was critical, and set up his Tradition Music. If a musician didn't have a publisher for original songs, Strachwitz would take care of it, and he made sure that his artists received regular composer royalty checks. Arhoolie did not have hit records, but many sold decently, especially in Europe. And when he would have been strapped for funds to continue, that publishing came in handy, and led to more recordings. When the Rolling Stones recorded Mississippi Fred McDowell's "You Gotta Move," composer royalties went to Arhoolie.

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Same with L.C. Good Rockin' Robinson's "Mercury Blues," recorded by a bunch of musicians, including the Steve Miller Band, David Lindley, and country great Alan Jackson, who had the big hit with it, before Ford Motor Company bought the song and changed it to "Ford Blues" for its pickup commercials.

The first and most important royalty check came by chance, however, and it wasn't even an Arhoolie project. In 1965 Country Joe McDonald, fresh out of the Navy, wrote an anti-Vietnam War song and wanted to record it in time to give away at an Oakland Army Induction Center rally. He was introduced to Strachwitz, who recorded McDonald's band in his living room, a single microphone hanging from the light fixture and the musicians standing under it. "I-Feel-Like-I'm- Fixin'-to-Die-Rag" was the result, pressed as a 45rpm single (inaugurating McDonald's Rag Baby label) and given away at the rally. When McDonald inquired as to what he owed, Strachwitz asked if he had a song publisher. No. So Strachwitz published the song, which flew under the radar for a few years even though it was on Country Joe and the Fish's second album for Vanguard Records. But then McDonald solo sang it at the 1969 Woodstock festival, and the following year it was a standout in the *Woodstock* film, which was one of the year's top ten film grossers, won the documentary Academy Award, while the soundtrack LP also became one of the year's biggest sellers. With the big royalties suddenly showing up, Strachwitz bought a warehouse in El Cerrito north of Berkeley, not a cultural hot spot, which became Arhoolie Records' office and distribution center, with Les Blank's Flower Films housed upstairs, and the front turned into one of the world's leading regional music stores, Down Home Music.

There's a lot of untold history in the building. Guitarist and Windham Hill Records founder Will Ackerman built the beautiful wooden counter in Down Home Music; blues master Charlie Musselwhite worked for years in Arhoolie's office packing records for shipment. Underground artist R. Crumb (a 78 fanatic) traded his drawings and album cover art in exchange for some of Strachwitz's rare 78s.

And then there's the music Strachwitz fell in love with on Border radio stations, Mexican cantina songs, corridos (the ballads, story-songs), and Tex-Mex or Norteño or conjunto music, the accordion-driven dance hall music. He wanted to make a film about the musicians, and teamed with acclaimed documentarian Les Blank, to find the musicians in their homes and dance halls in South Texas. There is a long list of musicians whose lives were affected by hearing Arhoolie records. Bob Dylan wrote in his memoir "Chronicles" about the revelation of discovering Arhoolie LPs. In *This Ain't No Mouse Music* a lineup of musical greats testify similarly: Bonnie Raitt, Richard Thompson, and Taj Mahal (who credits Strachwitz with making him love accordion music). Ry Cooder was 14 when in a Los Angeles record

store he heard the Arhoolie recording of bluesman Big Joe Williams doing "Sloppy Drunk," and that's when he decided to become a musician. Years later Cooder was listening to his car radio and heard high-energy accordion dance music in Spanish. "I called Chris and said, 'I heard this on the radio. What is it?" Strachwitz explained that it was conjunto (Spanish for "band"), and when Strachwitz and Les Blank went to South Texas to film the musicians for the documentary on South Texas music, *Chulas Fronteras*, Cooder tagged along, even got accordion lessons from Flaco Jiménez in San Antonio. At that point Flaco (like his Norteño pioneer father Santiago Jiménez) was a regional star, but once Cooder began recording and touring with Flaco, he became an internationally known and in-demand musician. In coming years Jiménez played with a who's who of music, in the bands Texas Tornados and Los Super Seven, recording with the Rolling Stones, Peter Rowan, Doug Sahm, and many others, perhaps most famously on the Buck Owens and Dwight Yoakam hit, "Streets of Bakersfield." Jiménez scored his first Grammy Award for his Arhoolie LP *Ay Te Dejo en San Antonio*.

Many of Strachwitz's discoveries were because he heard them performing in some small and out-of-the way place. He also issued many LPs and CDs of local Bay Area musicians who played blues and bluegrass, Mexican-American, old timey, plus international musicians who didn't fit any category. Favorite local artists included trad jazz Bob Mielke's Bearcats, the all-women Any Old Time String Band, the blues trio Howell-Devine, and Berkeley's Klezmorim, whose seminal recording *Streets of Gold*, with cover art by R. Crumb, helped launch the klezmer revival. It's another example of young musicians rediscovering their roots, Yiddish music that a generation and more had tried to forget as it assimilated into mainstream America. But the new generation (aided by historical reissues of early klezmer recordings by Strachwitz) heard it as wild and exuberant. And there was a short period where Arhoolie recorded some of the more advanced and free-blowing jazz, from saxophonist Sonny Simmons to guitarist Jerry Hahn.

While Strachwitz had an office, he was only occasionally at his desk; more often he was on another trip to record the roots music he loved. Flaco Jiménez explained, "The songs are the poetry of the people," and if Cajun, conjunto, and other styles were also coming from a variety of cultures, and treated as disposable by the music establishment, they were treasure to Strachwitz, who on countless expeditions to thrift stores and people's homes on both sides of the border, collected thousands of 78s, and used funds from his Arhoolie Foundation (dedicated to preserving and making available that wide variety of American Music) to collect and digitize those nearly non-existent Mexican 78s that were digitized and became the Frontera Collection, now housed

Photo by Gary Reyes

Chris Strachwitz with Norteño singer-accordionist Valerio Longoria in 1990.

at UCLA, music that would have otherwise been lost because nobody else saved it, now available to students and scholars. Earlier he put out a 19-LP series on the history of Texas-Mexican border music, a 4-CD set of songs about the Mexican Revolution, and later even a CD of Narcocorridos, songs often glorifying the drug lords and their exploits.

This was a major goal and achievement for Strachwitz. As he explained while tracking down the old records, "We want to have it all digitized and available for people to hear." Unlike jazz and blues, whose fans preserved records, "The Mexican and border music is a different story. While the people in their communities are proud of it, nobody tried to preserve it. The Mexican musicologists looked down at Norteño music and corridos because they viewed it as low class, music of poor people." The same with Louisiana music: "You can see changes in people's attitudes toward their music and culture. When I started recording Cajun music (the accordion and fiddle dance music of Western Louisiana French-speaking populace), they were treated like Gypsies and even shunned the label 'Cajun' because it was derogatory. Now they are proud of their culture, the music, the cooking. Being Cajun is desirable."

Chris Strachwitz lived the life he loved, seeking out and recording music that inspired him without concern about whether it would sell. His legacy continues: in 2016 the Smithsonian Institution acquired the entire Arhoolie catalog. Films he worked on are available to stream from various sources: *Chulas Fronteras* and *Del Mero Corazon* (both capturing living border musicians from Lydia Mendoza to Flaco Jiménez), *J'ai Été Au Bal* (the history of Louisiana Cajun and zydeco music), a documentary of his 1963 trip to track down Texas musicians, and the film about Strachwitz, *This Ain't No Mouse Music*. The Down Home Music store in El Cerrito continues to offer one of the world's great selections of American and world roots music on recordings and videos/films, where the regular parking lot 78s swap meet continues. And, the Arhoolie Foundation he set up to preserve and make available roots music continues with an advisory board that includes Bonnie Raitt, Taj Mahal, Bob Dylan, Linda Ronstadt, Tom Waits, and Charlie Musselwhite. Strachwitz is gone, but he has left the world an unequaled treasury of mouse-free music. tas

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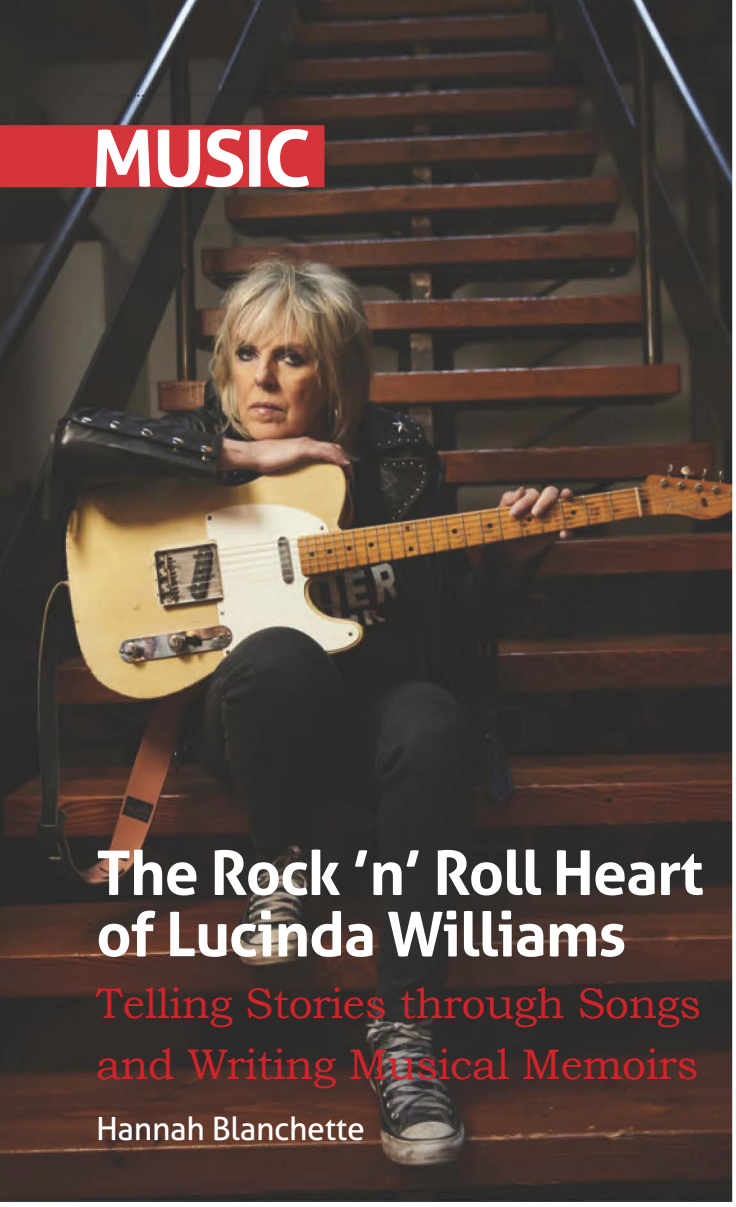

# The Rock 'n' Roll Heart of Lucinda Williams

## Telling Stories through Songs and Writing Musical Memoirs

Hannah Blanchette

**Memoirs often function as an arrival point, a juncture** in time in which the author pauses and reflects on everything that has led up to that moment. Consequently, this literary genre frequently gives off the impression that for the author, time stood still as they looked back. If there is one thing clear from Lucinda Williams' memoir, *Don't Tell Anybody the Secrets I Told You*, it is that Williams' life has been in motion from the start—touring Mexico City with Clark Jones, visiting the Bread Loaf Writers' Conference in Vermont, taking up odd jobs in Los Angeles—the stops on Williams' journey go on and on. This memoir is one stop before Williams hits the road again.

The singer-songwriter Lucinda Williams has been a crucial figure in shaping Americana since the late 70s, bringing elements of country, blues, folk, and rock to her poetic songwriting on releases spanning labels such as Folkways and Mercury. Through a breezy and conversational tone, Williams creates an engaging memoir that conveys her life in a way that feels like she's speaking to you. At the same time, her writing style is quietly evocative, with subtle turns of phrase that stick with you. Her lyrical voice is distinct from this approach, but it is evident that she can translate into narrative prose her deft ability to paint pictures lyrically.

The stories she shares in *Don't Tell Anybody* span her lifetime, beginning in the Deep South with her childhood equally immersed in the literati and deeply affected by her mother's mental illness. The book weaves through her young life learning to play music and starting her career in Houston, Jackson Mississippi, and Los Angeles, all the way into the making of her numerous records. Along the way, Williams crafts gorgeous portraits of the unique individuals she has met throughout her travels, making the memoir brim with life.

*Don't Tell Anybody* came out a few months before Lucinda Williams' 15th studio album, *Stories from a Rock n Roll Heart*. This album emerges out of the aftermath of a serious stroke Williams faced in 2020, which impacted her ability to play the guitar, a relationship that started at age 12. With more context from her memoir, this fact is devastating. She wrote, "As soon as I learned how to play my guitar, pretty much all my free time was spent sitting around learning these songs…It's the world I wanted to be in, a better world than the one I was in." However, Williams embraced the challenge to reconsider her songwriting process, which previously relied on the guitar.

The lead single, "New York Comeback," sets the tone for the record with its laid-back heartland attitude, featuring guest vocals from Bruce Springsteen and Patti Scialfa. The track introduces the overall atmosphere of *Stories from a Rock n Roll Heart*, which seamlessly blends uptempo country rock songs, reverberating guitar ballads, and intimate acoustic pieces. Each song is strung together by Lucinda Williams' distinctive vocals, delivering her lyrics with a husky swagger one second ("This Is Not My Town") and a wavering, downtrodden vibrato the next ("Hum's Liquor").

A definite standout is "Stolen Moments," a Tom Petty tribute that captures the late musician's style while channeling it through the Williams lens, from its lilting guitar intro, captivating chorus, and epic solos. However, the most compelling moments of *Stories from a Rock n Roll Heart* are found woven into the intimate tracks—descriptions of corner booths I could see if I closed my eyes ("Last Call for the Truth"), the perfect unity of Williams' falling vocals and a mournful steel guitar ("Jukebox"), and the dreamy introduction to the final track ("Never Gonna Fade Away").

Williams sings on that closing track about the times when it becomes hard to continue making music, "When the words don't rhyme/And I can't find a line/And I'm looking for a sign/And I'm running out of time." She asserts that she will never fade away, a statement that I wholeheartedly believe. Both *Don't Tell Anybody the Secrets I Told You* and *Stories from a Rock n Roll Heart* establish that even when she's "going crazy with the sound of [her] own voice," her voice is irreplaceable. Her words and music that have found a home on the page, in between the grooves of vinyl, and spoken directly to those dearest in her life are unlike anyone else's. It feels like there are infinite stories in that rock n' roll heart. tas

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# From MGM Musicals to Uncompromisingly Radical Copland

## Six by Conductor John Wilson

Paul Seydor

**Sometime in the early aughts the enterprising Brit**ish conductor John Wilson scheduled a concert of songs and instrumental music from the classic MGM movies and movie-musicals of the 40s, 50s, and 60s he loved from his childhood, to be performed by the John Wilson Orchestra, an ensemble he had founded 10 years earlier, while still in college, for the express purpose of playing such music, plus jazz. Upon discovering the studio had in 1969 destroyed most of the orchestral scores (for storage!), Wilson, rather than cancel the concert, elected to reconstruct them. Using piano reductions and the soundtrack recordings themselves, he began the almost inconceivably arduous task of creating new instrumental parts by *ear*—a whole morning," he recalled, "to get five or six seconds of music," a full weekend for the storm sequence from *A Wizard of Oz*. In the 20 years since that concert, he has reconstructed some 300 classic film and film-musical scores and performed them many times in concerts.

This is typical of the energy, dedication, and consummate musicianship Wilson brings to everything he does. When he turned his attention to the classical concert repertoire he was trained in, at the Royal Academy of Music (where he is now a Fellow), he developed an association with the BBC Philharmonic. Then, in 2018, he resuscitated the famous Sinfonia of London, a beloved studio orchestra active from the mid-fifties to the early aughts. The relaunched Sinfonia is made up of top-flight players handpicked by Wilson from the most distinguished UK and European orchestras, chamber groups, studio musicians, and soloists. Wilson's recordings with all three of these ensembles have garnered almost universally rave reviews, not to mention several awards and prize. I've spent much of the last two months immersing myself in these recordings. What follows are 6 I particularly enjoyed.

***The Best of the John Wilson Orchestra* (Warner Classics).** Every one of Wilson's movie-music compilations is superb, but start with this two-CD collection that pulls from all 10. Wilson's grasp of the idiom is second-nature, his performances have all the style, panache, and authenticity of the originals, and he uses experienced singers, who avoid the operatic trap of too much weight of tone. Sonics are so dynamic as to leap out of your speakers.

**Copland, *Orchestra Works, Volumes 2 & 4*. BBC Philharmonic (Chandos, SACD hybrid).** All four releases in this series are easily competitive with any Copland out there, while Chandos' reference-caliber reproduction is in a class by itself. Volumes 2 and 4 feature Copland the avant-garde master of absolute music, here the adventurous first symphony with organ, *Orchestral Variations*, the fiendishly difficult *Symphonic Ode* and second symphony, and the 12-tone *Connotations*, a gigantic, gritty, gnarly piece compressed into 20 intense, searingly powerful minutes. The latter disc is filled out with Copland's third symphony, where Wilson plays up lyricism at the expense of rhetoric and also restores the 22 bars Bernstein cut from the last movement's coda.

***Escales*. Sinfonia of London (Chandos, SACD hybrid).** This release reveals Wilson as a master program builder: seven late romantic/impressionist French works documenting the French attraction to the foreign, the far off, the exotic. Playing is virtuosic, clarity of line and texture, nuances of color, expression, and dynamics breathtaking: how softly Ravel's *Rhapsodie* steals in, how dreamily erotic is Debussy's *Faun* before it swells into those rapturous string passages, what a treat to get a rarity like Duruflé's delightful *Trois Danses*—all reproduced with that fabulous Chandos sound!

In 1963 Sir John Barbirolli recorded what is perhaps the single most celebrated album by the old Sinfonia of London: *English String Music*. The first LP the 11-year-old John Wilson ever bought, this remains his favorite record, his homage to it and its conductor these two albums of British string music by Vaughan Williams, Howells, Delius, Elgar, Britten, Bliss, Bridge, and Berkeley. Anyone who dismisses the relaunched Sinfonia as a "mere" pickup orchestra must contend with the fact that on these and their dozen other Chandos albums under Wilson, there is a level of string playing easily comparable to the top residential orchestras in the world. After Copland at his most uncompromisingly radical, the pieces here are tonal and tuneful, typical mid-century conservative British "modern," but no less delightful. And in terms of tone, timbre, dynamic range, bloom, and soundstaging, Chandos' recording lays fair claim to being the finest of a string orchestra in my collection. tas

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MUSIC ●●●●○ SONICS ●●●●○

**John Mellencamp: *Orpheus Descending.*** UMG/Republic.

Singer-songwriter John Mellencamp gets straght to the crux of the matter, opening this politically and socially conscious album with "Hey God," a stinging power-blues appeal to the man upstairs to clean up his Earthly mess. "This is not the garden of Eden, for sure," Mellencamp croaks in a cigarettes-scorched rasp. Mellencamp always has had a left-leaning libertarian viewpoint filtered through a heartland sensibility, and such songs as "The Eyes of Portland" and "The So-Called Free" decry homelessness, police violence, and what he sees as callous public policies that are failing America ("A land of plenty where nothing gets done"). He can be poetic or prosaic, even suggesting in "Understated Reverence" that the listener might just find the meaning of life, not in church, but in bluesman Bukka White's 12-string guitar. There's a laidback and sometimes weary folksiness to such most of these songs, including the lone cover, a wistful reading of Bruce Springsteen's "Perfect World." These blue-collar rants are as comfortable as a pair of well-worn blue jeans and find Mellencamp surrounding himself with an ace band that has backed him for decades: guitarist Andy York, fiddler Lisa Germano, keyboardist Troye Kinnett, and drummer Dane Clark. **Greg Cahill**

**Further Listening:** John Mellencamp/T Bone Burnett/Stephen King: *Ghost Brothers of Darkland County*

MUSIC ●●●●● SONICS ●●●●○

**Little Feat: *Dixie Chicken.*** Warner/Rhino (3 LPs).

Rhino leaps into its Little Feat reissues with a three-LP Super Deluxe Edition of 1973's *Dixie Chicken*, one of the era's seminal roots-rock albums. The band—singer/songwriter/guitarist/producer Lowell George, guitarist/vocalist Paul Barrere, keyboardist Bill Payne, bassist Kenny Gradney, drummer Richie Hayward, and percussionist Sam Clayton—was steeped in New Orleans R&B and funk. The title track, "Fat Man in the Bathtub," "Two Trains," and Allen Toussaint's simmering "On Your Way Down" later became staples of the band's propulsive live shows. The album was recorded at the Blue Seas Studio with legendary engineer George Massenburg at the console. This SDE includes an all-analog version of the original LP remastered by Bernie Grundman, a disc of demos and alternate takes, and a live LP recorded in 1973 at Paul's Mall in Boston. The second and third discs employ digital mastering. Meanwhile, the three-LP deluxe edition of 1972's *Sailin' Shoes*—with the original lineup of George, Payne, Hayward and bassist Roy Estrada—also has a triple-A remaster of the original album. The third platter has ten live tracks recorded in 1971 at the fabled Palladium in L.A, the sole multi-track recording of the original lineup. Both titles also are available on CD and digital formats. **GC**

**Further Listening:** Little Feat: *Waiting for Columbus* (MFSL, 2010 edition)

MUSIC ●●●●○ SONICS ●●●●○

**Wednesday: *Rat Saw God.*** Dead Oceans.

The quietly squealing electric guitar lines and feedback are haunting at the beginning of *Rat Saw God*'s lead single, "Bull Believer." With a whisper, the sounds foreshadow Karly Hartzman's visceral screaming and howling by the end of the track. The noisiness of the Asheville-based rock band is barely contained in "Bull Believer," bursting forth in quick moments like a near boiling-over pot. Throughout *Rat Saw God*, Wednesday's fifth album paints in abrupt contrasts. "Hot Rotten Grass Smell" has a subtle opening that, within seconds, erupts into a heavy wash of guitars and drums, only to end the onslaught with a cut to a field recording of peepers. Wednesday juxtaposes shoegaze and country to conjure a distorted, dreamy, and folksy sound that is perfect for driving the only car on the road between barren fields at night. Guitarist Jake Lenderman and lap steel performer Xandy Chelmis incorporate traditional country gestures into their playing that are comfortingly familiar ("Chosen to Deserve"), but can on a dime be twisted into a gnarled, gruff expression ("Bath County"). Through Wednesday's sharp shifts, unique warping of rock styles, and abstract, gothic lyrics, *Rat Saw God* is a thrilling ride of swerves and stops. **Hannah Blanchette**

**Further Listening:** Wednesday: *Twin Plagues*; Horsegirl: *Versions of Modern Performance*

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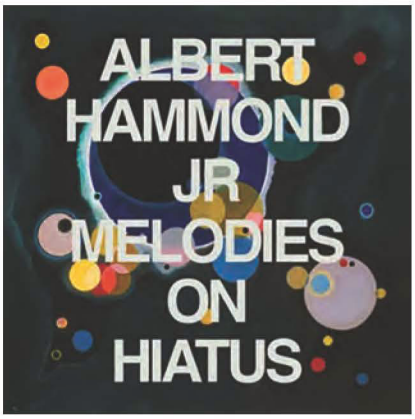


MUSIC ●●●●○ SONICS ●●●●○

**Albert Hammond Jr.:** ***Melodies on Hiatus.*** Red Bull.

With *Melodies on Hiatus*, Albert Hammond Jr. delivers a shimmery set of indie pop-rock signaling both summer and a new direction in his solo career. As a founding member and lead guitarist for the Strokes, his full-time gig, Hammond has now released five acclaimed solo records in between the Strokes' own projects. This sprawling 19-song CD buzzes with Hammond's hook-fueled fusillades of punchy guitar, but it also infuses fresh vibes with smears of hip-hop and new wave diffused through the songs' bright sonic textures. Hammond's lean, scrappy arrangements are reminiscent of the Strokes, but they pursue more eclectic sounds. Hammond collaborates with Simon Wilcox, a Canadian songwriter, for help with some of the lyrics. The moody first single "100-99" features Goldlink rapping in the interludes behind a magnetic synth riff, drum machine, and Hammond's melancholy vocal. Throbbing with neon energy and attitude, "Downtown Fred" comes on like an NYC club rouser and features a golden chorus. "My Old Man" (a rocker ode to Hammond's father), "Home Again," and "Darlin'" swirl with an infectious streak of power pop meets new wave bliss. For a double record, *Melodies* is remarkably consistent in its quality and scope, and it rivals the Strokes' better records. **Greg Gaston**

**Further Listening:** Pulp: *Different Class*; Guided by Voices: *La La Land*

MUSIC ●●●●○ SONICS ●●●○○

**Son Volt:** ***Day of the Doug.*** Transmit Sound.

The Doug in question is Doug Sahm of the Sir Douglas Quintet and the Texas Tornados—influential musician, wild man, and friend of Jerry Garcia, Roky Erickson, Willie Nelson, and Jay Farrar of Son Volt. When Farrar was in Uncle Tupelo, he and Sahm duetted on the Texan's "Give Back the Key to My Heart," and the two formed a friendship that lasted until Sahm's death in 1999. Coming out of the pandemic, Farrar and his band decided to have some fun and do a tribute to Sahm. They passed on his big hits like "She's About a Mover" (originally "She's a Body Mover"), digging deeper into his catalog for songs Farrar hadn't even heard before. There are feel-good numbers like "Seguin" and "Float Away," lessons learned like "Sometimes You've Got to Stop Chasing Rainbows," and lost-love boot-scooters like "Huggin' Thin Air." Son Volt brings their trademark cowpunk crunch and an infectious energy. I associate Farrar's voice with his own highly literate writing, but he even got me enjoying lyrically weaker songs like "Dynamite Woman." The conjunto bounce of "Poison Love" sounds authentic, and Son Volt's new guitarist, John Horton (Bottle Rockets), delivers some fluid solos. "Beautiful Texas Sunshine" indeed. **Stephen Estep**

**Further Listening:** Bottle Rockets:*Songs of Sahm*; Various Artists: *Keep Your Soul: A Tribute to Doug Sahm*

MUSIC ●●●●● SONICS ●●●●○

**Youth Lagoon:** ***Heaven is a Junkyard.*** Fat Possum.

Youth Lagoon's *Heaven is a Junkyard* is an intimate, stunning, and quietly confident record. Trevor Powers' return to the Youth Lagoon moniker after battling physical and mental health setbacks in recent years feels like a simultaneous homecoming and rebirth. There is a certain clarity and ease to the songwriting, a settled-ness in the storytelling, and purposeful arrangements that invite closer listening. Primarily piano driven, *Heaven* uses electronics sparingly to support a minimalist rhythm section, creating a wistful aura around the grounded acoustic instruments. The thread of gritty, small-town, American gothic that runs through the album—inspired surely by Powers' current residence in rural Idaho—mixes with the delicate production to elicit a magnetic nostalgia that is just fresh enough to keep the listener curious. No two tracks truly sound the same, but the album manages to maintain a cohesiveness, a difficult feat to pull off with such success. While there aren't any songs that are weak links, the clear standouts are the bookends "Rabbit" and "Helicopter Toy" as well as the extremely catchy "Prizefighter" and eerie, dreamy "Deep Red Sea." Youth Lagoon has cemented his legacy with *Heaven*, and I can only hope Powers' return to the project means more music as moving as this. **Jerika Hayes**

**Further Listening:** Destroyer: *Labyrinthitis*

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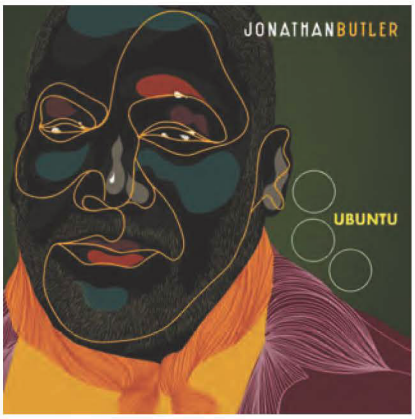


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**Jonathan Butler: *Ubuntu.*** Mack Avenue/ Artistry Music.

In Zulu philosophy, the word Ubuntu means showing humanity to your brother. Around this idea Jonathan Butler has conceived a powerful collection of tunes speaking to his South African experience—now 61, he began performing as a seven-year-old wunderkind in Cape Town—and to the Zulu ideal alike. With Keb' Mo' on "When Love Comes In," his plaintive tenor and Keb"s gritty baritone, with sumptuous choral group backing, sing of a world where "love will lead the way" in a tune that is both folk and gospel rooted in its sentiments and rhythms. A quiet ballad, "Our Voices Matter," finds Butler's gently picked acoustic guitar and close-miked vocal underscoring a message urging collective dignity born of spiritual introspection. Amid the burbling percussion and triumphant horns of "Rainbow Nation," he celebrates those who join hands in solidarity as "all of us affirmation, fountains of fire, holy survivors." Old friend Stevie Wonder shows up on chromatic harp on Butler's baroque cover of the second half of Stevie's two-part 1972 lament for lost love, "Superwoman (Where Were You When I Needed You)," a lovely, haunting track not necessarily in keeping with *Ubuntu*'s animating conceit but no less compelling on an album that is compelling in the extreme. **David McGee**

**Further Listening:** Paul Simon: *Graceland;* Ladysmith Black Mambazo: *Long Walk to Freedom*

MUSIC ●●●●○ SONICS ●●●●○

**Ray Curenton: *Believer, a.k.a., The Last Shall Be the First.*** Imagination Fury Arts.

A self-described Black liberationist and cultural worker, Nashville-based Ray Curenton is also a gifted soul crooner whose third album is both confrontational and measured. Confrontational: the angry outpouring of grievance and summons to action that is "No Empires!" set to a maelstrom of hip-hop effects clearly meant to evoke a world on fire. Here, Curenton earnestly reports on "our people being robbed of youth" before yielding to a pair of white-hot appeals for civil disobedience courtesy guests April Rucker and Civil, advancing the message, "Can't take it any longer/Then what are we waiting for?" Measured: Over a swirling, percussive hip-hop backdrop supporting a catchy ostinato guitar riff in "Profit," Curenton, his voice as commanding as it is rational, addresses the greater goal: "Yet in time, every tide starts turning/ So it's best you start discerning/And give up materialism." Easier said than done, as he admits in a gripping acoustic ballad, "Stars." His wounded falsetto hovering delicately over guitar and violin, he poses a series of existential queries underscoring the paradox of individual commitment: "How do I scent the trail of life/ When all I taste is what I despise/How do I reach a joy divine/When all I hear are lies." Well, what say you? **DM**

**Further Listening:** J. Moss: *V2...*; Aaron Sledge: *Da Light*

MUSIC ●●●◐○ SONICS ●●●●○

**Wye Oak: *Every Day Like the Last.*** Merge.

On their seventh studio album, *Every Day Like the Last*, Wye Oak gets contemplative, creating a record calmer and more introspective than anything the duo has produced before. Less synth-heavy and harmonically complex, the album shows off the group's intricacy in songwriting, using subtler ways to play with meter and harmony, which feels like a natural progression for the pair that has been working together since the mid-2000s. However, the pacing on the album doesn't quite pay off. It starts with three mellow tracks before ramping up with the hypnotic, 7/4 time "Its Way with Me." When it launches into the driving "Fortune"—one of the more typical Wye Oak-sounding songs on the album—it picks up the pace for several more tunes before winding down right at the end. Placing all of the stronger, rock-forward tracks back-to-back makes those beginning songs seem almost forgettable, and the emotional weight of the truly stunning "I Learned it From You" is lost with the track sandwiched between two other slower tracks. Overall, *Every Day* feels like it's lacking some of the spark Wye Oak is known for, but it is still a worthwhile listen and another solid addition to their catalog. **JH**

**Further Listening:** Owen Pallett: *Island;* Snarky Puppy: *Empire Central;* Wye Oak: *The Louder I Call, The Faster It Runs*

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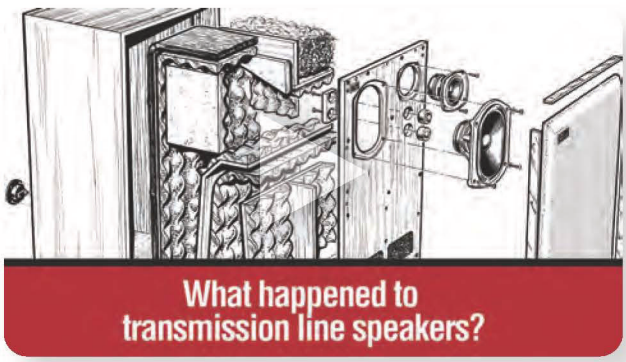


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MUSIC ●●●●◐ SONICS ●●●●●

**Clair Marlo: *Let It Go.*** Brilliance Music & Studios.

Brilliance Music & Studios now offers a limited edition two-reel quarter-inch 15ips master-quality tape reissue of *Let It Go* with deluxe packaging that includes a multi-page booklet signed by Clair Marlo. The tapes (on precision 10.5-inch reels with high-quality flanges, signed by Bernie Grundman) are one-off duplicates that use an all-analog chain and are sourced from the original Sheffield Lab direct-to-two-track master tape. They were copied and mastered by Grundman for Brilliance Music & Studios in conjunction with Genesis Advanced Technologies and Hyper Analogue Productions under exclusive license with Clair Marlo. This master tape transfer breathes new life into an older recording session. The overall sound of the 13 tracks (ten original plus three bonus) is spectacular for this all-analog recording dating back to the late 80s. What Marlo fans get with this tape is a revived listen to beloved tracks like "Without Me" or "'Til They Take My Heart Away" with more lucidity and insight into each composition's intricate musicianship of both singer and supporting cast. No other release of this album will bring the listener closer to the original direct-to-two-track master than this tape, which costs $1500. The resulting sonics and illustrations of music are beyond any version of this album heard to date. **Andre Jennings**

**Further Listening:** Pat Coil: *Steps*

MUSIC ●●●●◐ SONICS ●●●●●

**Bahamas: *Bootcut.*** Brushfire.

Originally attracted to the music of the indie-folk singer-songwriter Bahamas because of the excellent sound quality on his fourth album, *Earthtones*, I became a fan of the artist due to his musical chops and penetrating lyrics. On *Bootcut*, Bahamas went to Nashville's Sound Emporium studio, where he recorded with such top-tier musicians as Vince Gill, Sam Bush, and Russ Pahl. The result is a country-influenced album of personal pop. The album opens with a short 54-second cut called "Girls Bugging Me" which captures what is probably a common domestic scene—Bahamas working on a song at home while babysitting. What follows is a glorious musical confection titled "Just a Song," which encapsulates Bahamas' songwriting philosophy. Of the eleven tunes on *Bootcut*, the two that resonate most strongly with me are "Sportscar," which equates the act of having a sportscar with the joy of living, and "Nothing Blows My Mind," a rumination on recovering from the loss of a loved one. Musically Russ Pahl's pedal steel work throughout the album is alone worth the price of admission. On *Bootcut* Bahamas delivers an album that will make the summer of 2023 far more enjoyable for anyone who loves fine pop music. **Steven Stone**

**Further Listening:** Finneas: *Optimist*; Alexis Harte: *Six Spoons of Honey*; Vince Gill: *Down To My Last Bad Habit*

MUSIC ●●●●◐ SONICS ●●●●◐

**Rufus Wainwright: *Folkocracy.*** BMG (2 LPs).

Rufus Wainwright grew up in what he calls "a bona-fide folkocracy." His father is Loudon Wainwright III, his late mother was the Canadian folk artist Kate McGarrigle, and his siblings Martha Wainwright and Lucy Wainwright Roche all are steeped in folk music. At 50, and after flirtations with pop and opera, he's returned to the music of his youth. There's a sentimental quality to *Folkocracy*, a two-LP set of original, covers, and trad songs produced by Mitchell Froom, but this is not café-style or trad-folk music, Wainwright's pairing with Van Dyke Parks has an artsy Roma vibe, and guest artists include Brandi Carlile, John Legend, David Byrne, Sheryl Crow, Susanna Hoffs, Chaka Khan, and Andrew Bird. Wainwright's sublime voice still has a dramatic flair, as heard on the beautiful duet "Alone" with West Coast folk-rocker Madison Cunningham. A richly harmonized spin on the Mamas & Papas' "Twelve Thirty (Young Girls are Coming to the Canyon)" features Crow, Hoffs, and Chris Stills. In a nod to his late mother, the album closes with a breathtaking rendition of "Wild Mountain Thyme," with Rufus gathering his sisters, aunt Anna McGarrigle, cousin Lily Lanken, and family friend Chaim Tannenbaum, the latter playing Rufus' late mother's iconic banjo. **GC**

**Further Listening:** Rufus Wainwright: *Take All My Loves: 9 Shakespeare Sonnets*

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**Kenny Wheeler: *Gnu High.*** ECM (LP).

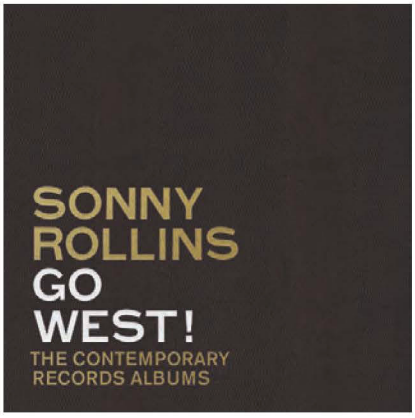
MUSIC ●●●●○ SONICS ●●●●◐

**Larry Coryell: *Tricycles.*** In + Out (2 LPs).

When a record company with over 1700 titles under its belt launches an audiophile vinyl reissue series, it pays to be picky, as the label will only be able to revisit a small percentage of its discography. As it turns out, Kenny Wheeler's *Gnu High* is an excellent choice to help roll out ECM's new Luminessence series. Upon its release in 1975, *Gnu High* was widely heralded by critics and jazz fans alike, and it's now looked upon as an early ECM classic that was unique both for its personnel and ambition. Although some of the musicians had collaborated in the past, this was a one-time-ever lineup that happened to include pianist Keith Jarrett in a supporting role. With Wheeler focusing exclusively on flugelhorn for this session and bassist Dave Holland and drummer Jack DeJohnette rounding out the ensemble, this quartet displays the telepathic interplay that's the mark of a fine jazz band. The centerpiece of the record, a sidelong suite entitled "Heyoke," finds the quartet taking numerous detours during an extended musical journey, and the result is a performance where the whole exceeds the sum of its parts. The reissue of *Gnu High* was from cut the original masters, and side-by-side comparisons with my original German pressing reveal many of the same virtues: The sound is seductive, there's plenty of air between instruments, Wheeler's flugelhorn floats over the other instruments like a high-flying bird, and you hear every nuance of an unusually nimble rhythm section. If you're hearing "Heyoke" for the first time, put your cell phone in the other room and listen all the way through—and then flip the platter.

Another German label digging into its archives is IN + OUT, whose first-ever vinyl release of 2003's *Tricycles* finds Larry Coryell joined by two Pat Metheny Group alumni, electric bassist Mark Egan and drummer Paul Wertico. Apparently all three players were frazzled after a grueling European tour trio, but the trio sounds inspired throughout a 12-song set that includes standards, originals, and a pop tune by some lads from Liverpool. On Coryell's "Good Citizen Swallow," Thelonious Monk's "Well, You Needn't," and "Spaces Revisited," Coryell burns up the fretboard, combining classic jazz guitar licks with a touch of grittiness; play these tracks for your friend who complains that jazz guitar is too tame. Other highlights include a lovely reading of Monk's "'Round Midnight" and a cover of the *Sgt. Pepper* ballad "She's Leaving Home" that features some highly tasteful acoustic playing by Coryell. The reissue of *Tricycles* was remixed and remastered from the original tapes by Winnie Leyh, and the clarity, warmth, and bloom we seek in a jazz vinyl reissue are captured in those grooves. In upcoming issues of TAS, expect more coverage on ECM, IN + OUT, and several other jazz labels who have achieved an outsized presence in the audiophile community, and for good reason. **Jeff Wilson**

**Further Listening:** Nana Vasconcelos: *Saudades*; Gary Burton: *The New Quartet*; Keith Jarrett: *Solo Concerts: Bremen/ Lausanne*




MUSIC ●●●●● SONICS ●●●●◐

**Sonny Rollins: Go West.** Craft Recordings/ Contemporary (3 LPs).

The two albums Sonny Rollins recorded for Contemporary Records are often grouped together, as both were late 50s sessions matching the Manhattan-based Rollins with top-tier West Coast players. Both sessions displayed Sonny's penchant for performing compositions that, in the jazz world, weren't exactly common—so, for example, Johnny Mercer's "I'm An Old Cowhand" definitely *wasn't* a jazz standard when 1957's *Way Out West* was released. Both albums also marked a period of searching: *Way Out West* was the first-ever trio date for Rollins (who's accompanied by Ray Brown on bass and Shelly Manne on drums) while 1959's *Sonny Rollins and the Contemporary Leaders* explores different instrumental combinations as Rollins searched for a meeting point between the more hard-edged East Coast sound with the cooler West Coast vibe. Craft Recordings' *Go West!* pairs those dates with some outtakes that include extended and highly recommended performances of two *Way Out West* tracks. Cut from the original analog tapes by Bernie Grundman, *Go West!* boasts clear and open sonics with lots of air between instruments, and if you like Ray Brown and Leroy Vinnegar, let's just say that both bassists make their presence felt. As for Sonny, well, that was never an issue, was it? **JW**

**Further Listening:** Hampton Hawes: *Everybody Likes Hampton Hawes*

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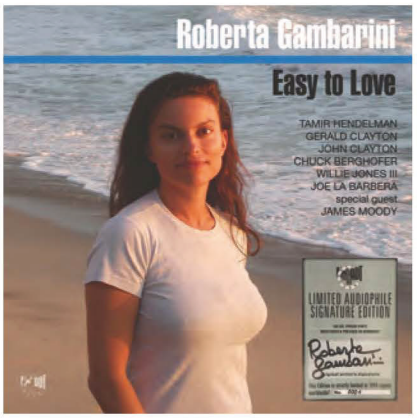
**Joshua Redman: *where are we.*** Blue Note.

A leading voice of his generation, saxophonist-composer Redman ventures into new territory on his Blue Note debut. While his previous 23 albums were all instrumental, he builds this ambitious program around vocalist Gabrielle Cavassa, co-winner of the 2021 International Sarah Vaughan Jazz Vocal Competition. At once intimate and captivating, her voice has an expressive, vulnerable quality that accentuates the drama of Redman's "After Minneapolis (face toward mo[u]rning)," a tune which, written in response to George Floyd's murder, conveys a gentle yet riveting power. Redman's cathartic blowing after her haunting vocal refrain conveys the horror of that tragic event. Guests on this city-themed concept album include guitarist Kurt Rosenwinkel on a soul-jazz take on Bruce Springsteen's anthemic "Streets of Philadelphia," trumpeter Nicholas Payton on "Do You Know What It Means to Miss New Orleans," and vibraphonist Joel Ross on an uncharacteristically reflective "Chicago Blues," which melds the familiar Count Basie-Jimmy Rushing tune to shimmering U2-like arpeggios. Cavassa conjures up comparisons to Billie Holiday on intimate readings of "By the Time I Get to Phoenix" and "I Left My Heart in San Francisco," and she shines on a sublime duet with Redman on "Stars Fell on Alabama." **Bill Milkowski**

**Further Listening:** Joshua Redman/Brad Mehldau: *Nearness*

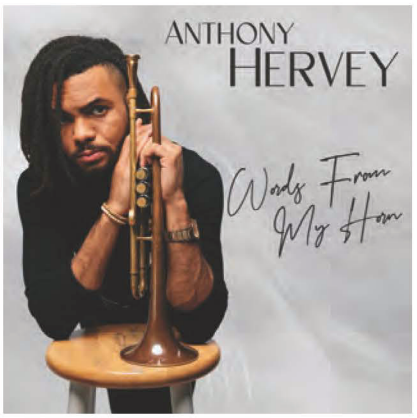



MUSIC ●●●●● SONICS ●●●●◐

**Roberta Gambarini: *Easy to Love.*** IN+OUT (2 LPs).

How easy is it to love Roberta Gambarini? Listening to her gloriously warm and wide-ranging voice that leaps to thrilling heights and sculpts tender ballad phrases, it's impossible not to love this incredible artist. The level of skill and ability Gambarini possesses simmers throughout this vinyl reissue of *Easy to Love*, which features her with two rhythm sections recorded live off the floor. The musicians include pianists Tamir Hendelman and Gerald Clayton, bassists John Clayton and Chuck Berghofer, drummers Willie Jones III and Joe La Barbera, and guest saxophonist James Moody. Your feet may leave the floor while listening to Roberta fly through "Sunnyside of the Street" in a vocalese and scat rendition based on the famous 1957 Dizzy, Stitt, and Rollins recording. Every word rings true when she sings "Only Trust Your Heart." The sizzling tempo of "Lover Come Back to Me" that follows the rubato verse boisterously swings. Several songs begin with her voice alone, creating an intimacy that invites you deeper into the story of each lyric. The vinyl was cut by Thorsten Scheffner at Organic Music Studio and boasts a black noise floor and pristine sonics, making it a welcome recording for audiophile collections. **Karin Plato**

**Further Listening:** Roberta Gambarini: *So In Love*; Sonny Rollins, Dizzy Gillespie, Sonny Stitt: *Sonny Side Up*




MUSIC ●●●●○ SONICS ●●●●○

**Anthony Hervey: *Words from My Horn.*** Outside in Music.

I became familiar with trumpeter/composer Anthony Hervey during one of pianist Emmet Cohen's livestream broadcasts last year. I enjoyed what I heard and looked forward to the next opportunity. On his debut as a leader, Hervey is joined by fellow up-and-comers in alto saxophonist Sarah Hanahan, pianist Isaiah J. Thompson, bassist Phillip Norris, and drummer Miquel Russell for a performance of ten Hervey originals, a standard, and a gospel hymn. As a composer Hervey displays a great deal of variety in his writing. The opener, "Crystal Stair" opens with a free intro, then gets to some serious up-tempo burn after the melody is stated. "The Rust from Yesterday's Blues" features a boogaloo-like groove and a turnaround reminiscent of Freddie Hubbard's "Red Clay." Referring not to an aircraft but to a swinging chair on the porch of Hervey's grandparents, "The Glider" is a relaxed swinger that would sound right at home on a 1960s Blue Note recording. The gospel hymn "His Eye Is on The Sparrow" is performed as a duet with Thompson before segueing into the joyous "Better Days." Hervey even displays his vocal abilities on "Smoky Cloud," a homage to his cigarette-smoking grandmother. So far, so good for Mr. Hervey! **Greg Turner**

**Further Listening:** Keigo Hirakawa: *Pixel*; Freddie Hubbard: *Red Clay*

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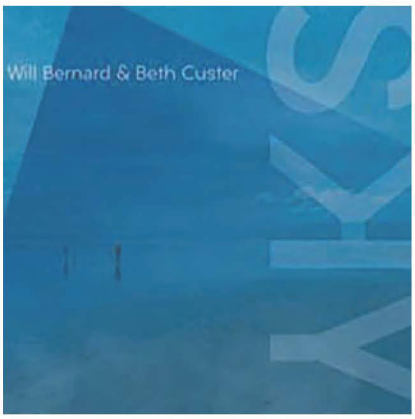
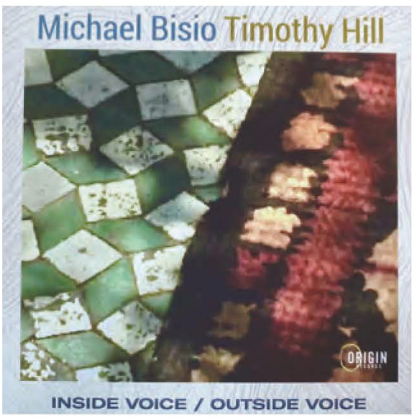



MUSIC ●●●●◐ SONICS ●●●●◐

**Will Bernard & Beth Custer: *Sky*.** Dreck to Disc.

Thirty or so years ago, an emerging San Francisco Bay Area "new jazz" movement was attracting a cross-generational audience to alternative venues with fresh, eclectic, and multicultural sounds that drew from such varied inspirations as Thelonious Monk, Ornette Coleman, Don Cherry, James Brown, Fela Kuti, film scores, and more. Guitarist Will Bernard and clarinetist/vocalist Beth Custer were major movers in that milieu. Bernard moved to Brooklyn while Custer stayed in San Francisco. The instinctive flow and tender spirit of *Sky*'s 15 original compositions (plus a stirring version of "John Brown's Body") speak to the powerful, intuitive musical bond that has endured between Bernard (electric, acoustic, lap steel, and resonator guitars) and Custer (Bb and bass clarinets and a bit of singing). Their duets are brief musical conversations, sometimes tight, sometimes dreamy, sometimes whimsical, flavored by folk, blues, old-time jazz, free improvisation, and chamber music. They distill the heady brew of Northern California's swashbuckling 90s new jazz down to its essential characteristics. Most pieces clock in under three minutes and yet tell complete, intricately detailed, and nuanced stories. **Derk Richardson**

**Further Listening:** Junk Genius: *Ghost of Electricity*; Beth Custer Ensemble: *For the Grace of Any Man*




MUSIC ●●●●◐ SONICS ●●●●●

**Michael Bisio and Timothy Hill: *Inside Voice/Outside Voice*.** Origin Records.

Covering standards can be risky business, especially when someone has previously put an indelible stamp on a tune, the way Johnny Hartman and John Coltrane did on "My One and Only Love," and Chet Baker on "I Fall in Love Too Easily." But on this cleverly titled recording with bassist Michael Bisio, singer/guitarist Timothy Hill takes possession of those classics, as well as "For All We Know" (made famous by Nat "King" Cole), allowing us to hear new subtleties in the lyrics and melodies, and feel how he approaches the songs with vulnerability and affection. The duo arrived at this one-continuous-take session with deep avant-garde and experimental experience, including Bisio's with Matthew Shipp, Ivo Perelman, and Joe McPhee, and Hill's with David Hykes and the Harmonic Choir, John Cage, Iva Bittová, and Hindustani and Tibetan vocalizing. Their improvisations and extended techniques on acoustic bass and guitar take surprising turns but stay intimately connected, even when they get ferally abstract for a couple of minutes here and there. And Hill's multi-pitch overtone singing, especially when melded into Bisio's arco drones, takes the music into mystical realms where folk, jazz, classical, and devotional traditions become one, where there is no boundary separating inside and outside. **DR**

**Further Listening:** Matthew Shipp Trio: *World Construct*

MUSIC ●●●●● SONICS ●●●●○

**Charles Mingus: *Changes: The Complete 1970s Atlantic Studio Recordings*.** WMG/Rhino.

After being canned in 1973 by Columbia Records, Charles Mingus returned to Atlantic Records, where he had recorded classic albums in the late 50s and early 60s. Collected in an 8-LP/7-CD box set, these seven studio recordings for Atlantic chronicle the final chapter of the great bassist and prolific composer. On *Mingus Moves* (1973), Don Pullen and George Adams make a great tag team, boldly straddling an inside-outside aesthetic with rolling avant-ish piano figures and passionate tenor intensity on "Opus 4," "Wee," "Flowers for a Lady," and the New Orleans second line-flavored "Big Alice." On 1974's *Changes One*, Mingus introduces his gorgeous "Duke Ellington's Sound of Love" while 1975's *Changes Two* introduces his protest song "Free Cell Block F, 'Tis Nazi U.S.A." *Three or Four Shades of Blues* (1977) introduces guitarists John Scofield, Philip Catherine, and Larry Coryell on a blazing blues-gospel-fusion romp through "Better Git Hit in Your Soul," a swinging "Nobody Knows," and a delicate "Goodbye Pork Pie Hat" on acoustic guitars. *Cumbia & Jazz Fusion* (1978) features a large cast and includes music from Mingus' soundtrack to *Todo Modo*. The posthumously released *Me, Myself an Eye* and *Something Like a Bird* are both all-star sessions. **BM**

**Further Listening:** Charles Mingus: *Blues & Roots*

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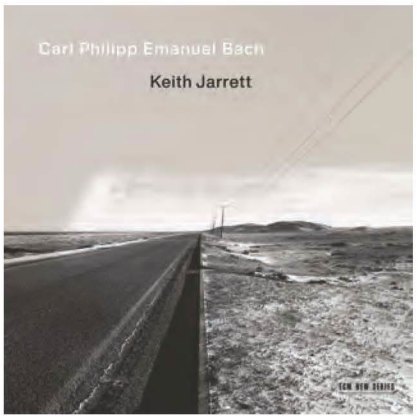


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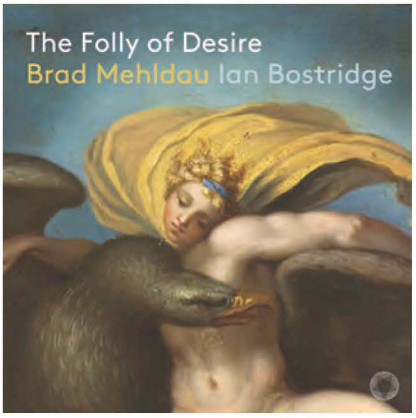
**C.P.E. Bach: Württemberg Sonatas.** Keith Jarrett, piano. ECM.

The mighty J.S. Bach had several children who established musical careers, but Carl Philipp Emanuel Bach, or C.P.E. Bach as he is commonly known, was the most successful. Father and son worked in different eras; J.S. was, of course, a pillar of the Baroque age, and C.P.E., a contemporary of Haydn, was a product of Classicism. And while Papa's music was largely, magnificent, the scion's work was delightful in an exuberant way that rarely registers in his father's music. These sonatas were written in 1744, when the elder Bach was still alive and composing, and thus function, stylistically, as a kind of bridge to the Classical era. They also reflect a major evolution in keyboard design; CPE Bach wrote for both the harpsichord and the fortepiano, as well as his favorite keyboard, the clavichord. His music for keyboard, then, can be authentically performed on a variety of keyboard styles, including, as is the case here, the modern piano. Jazz great Keith Jarret is no stranger to this world, having recorded unusually elegant and thoughtful Bach and Mozart for the ECM label, and here brings a similar insight into this brilliant music, on this previously unreleased recording from 1994. **Peter Burwasser**

**Further Listening:** J.S. Bach: The Well-Tempered Clavier, Book 1 (Keith Jarrett, piano/ECM)




MUSIC ●●●●○ SONICS ●●●●●

**Mehldau: *The Folly of Desire.*** Ian Bostridge, tenor; Brad Mehldau, piano. Pentatone.

Brad Mehldau is one of the finest jazz pianists of his generation, and while there is certainly a good deal of jazzy inflections in this new song cycle (Mehldau fans will recognize the chord progressions), Brahms is probably an even greater influence here. This project derives from an artistic partnership with British tenor Ian Bostridge, the acclaimed art song interpreter. Mehldau has set 11 poems to music, drawing from the classic canon, including the words of Shakespeare, Yeats, Blake, Auden, and others, all connected by a panoply of views on carnal desire. (Parental warning; there is one song, a bouncy setting of e.e. cummings, that is quite profane, but in a cheeky way.) Bostridge, in his notes, calls the work "a stunning addition to the lieder tradition," and sings the music in that spirit, with the same focused tonality and emotional perception that he brings to Schubert. And as if to bring their vision of art song full circle, Mehldau and Bostridge also include a handful of numbers from the Great American Songbook, which finds Schubert snuggling comfortably between a pair of Cole Porter classics. Excellent, nicely balanced sound, as usual, from Pentatone. **PB**

**Further Listening:** Schubert: *Die schöne Müllerin* (Ian Bostridge, tenor/Pentatone); Brad Mehldau: *The Art of the Trio Volume One*

MUSIC ●●●●◐ SONICS ●●●●◐

**Fauré: *Nocturnes & Barcarolles.*** Marc-André Hamelin, piano. Hyperion (2 CDs).

Coming across this new recording of Gabriel Fauré's 13 Nocturnes and 13 Barcarolles reminds me of the doctoral theory seminar we all had to take in graduate school. Starting with Bach, skipping Mozart and Beethoven, we went to Schumann, Chopin, and Brahms, then to Franck, and, finally Fauré—by which point, we realized, functional harmonic analysis was meaningless. But such beautiful music! Full of perfumed ninth chords, emotional yet restrained, sensuous and ardent, suffused with a feeling halfway between melancholy and gentle rapture—"intensity on a background of calm," as Alfred Cortot put it. That's precisely what emerges in this two-disc traversal of Fauré's most intimate thoughts for the piano. Hamelin's refined taste and limitless technique serve the music well, whether in the seductive arpeggios and fluid chromaticism of the Barcarolle in A Flat, Op. 44, or the complex textures of the Barcarolle in F Sharp Minor, Op. 66, or the precarious passions of the B Minor Nocturne, Op. 119, with its pure melody in the right hand and intractable yet beautiful dissonances in the left. As a bonus, Hamelin teams with Cathy Fuller to give the six miniatures of the four-hand *Dolly* Suite a delightful ride. Pure joy, and not too much perfume. **Ted Libbey**

**Further Listening:** Bolcom: *Rags* (Hamelin/Hyperion); Grainger: *Piano Music* (Hamelin/Hyperion)

MUSIC ●●●●● SONICS ●●●●●

**Ysaÿe: Six Sonatas.** Hilary Hahn, violin. Deutsche Grammophon.

In every respect, the Belgian violinist-composer Eugène Ysaÿe was an artist of the first rank. Generous, good-natured, and intensely dedicated, he was a supreme master of his instrument—yet he always insisted that virtuosity should serve the composer and the music, not the performer. That seems to be the watchword in Hilary Hahn's new recording of his greatest work, the Six Sonatas, Op. 27, for unaccompanied violin. Written a century ago, each of the six was dedicated to a violinist of what was then the younger generation—in order, Joseph Szigeti, Jacques Thibaud, George Enescu, Fritz Kreisler, Mathieu Crickboom (second violin in the Quatuor Ysaÿe), and Manuel Quiroga. All are filled with rich and incredibly challenging writing, especially the flamboyant one-movement Sonata No. 3 in D Minor, subtitled *Ballade*. Hahn sees the whole landscape of these works—not just the grand line in each individual piece, but how the six fit together, just like Bach's great six. Her approach is singing, soaring, spiritual, with a light touch in the passage work, beautiful tone, and breathtakingly good intonation in multi-stops. Recorded at the WGBH studio in Boston (extra credit for those who know what "GBH" stands for), the sound is superb. Truly a disc to be cherished. **TL**

**Further Listening:** Ysaÿe: Six Sonatas, Op. 27 (Leonidas Kavakos/BIS); *Leila Josefowicz: Solo* (Philips)

MUSIC ●●●○○ SONICS ●●●●●

**Rachmaninoff: Piano Concerto No. 3.** Lang Lang; St Petersburg Philharmonic, Temirkanov. Telarc/Craft (LP).

I'll confess that Rach 3 has never appealed to me emotionally like the Second Concerto and *Paganini Rhapsody* do, and this Lang Lang recording from the 2001 Proms doesn't change my mind. It is too short on poetry. Don't get me wrong: Lang is sensitive and humorous, and some parts are thunderous and dramatic, but clarity is emphasized at the expense of the heart. I can admire and learn from a skeleton, but I'm not going to fall in love with someone because of her x-ray. For romance, I'll go with Santiago Rodriguez on Elan. But if you like Lang Lang in Rachmaninoff, here's your chance to grab it on LP for the first time. Jack Renner and Michael Bishop engineered this 2002 release, which came out a few years before Concord bought Telarc and redirected the label. Ryan Smith at Sterling Sound cut the lacquers and Optimal pressed the 180-gram LPs. The sonics were already beautiful, but the LP offers a touch more warmth. Craft Recordings has also reissued several Telarc LPs from the 70s and 80s: their *Pictures at an Exhibition* with Maazel is somehow more vivid with an even richer low end. **Stephen Estep**

**Further Listening:** Orff: *Carmina Burana* (Atlanta Symphony, Robert Shaw, Telarc/Craft)

MUSIC ●●●●◐ SONICS ●●●●●

***An Old Hall Ladymass.*** Trio Mediaeval. 2L (Pure Audio Blu-Ray + SACD).

Trio Mediaeval cemented their reputation as engaging interpreters of early music with the eight albums they made for ECM; this is their second for 2L. With their impeccable timing, elegant phrasing, and clear yet ethereal tones, they now illuminate music that sat in silence for 400 years. In the early 15th century, an anonymous scribe wrote out around 200 motets and movements from masses that had been improvised or composed over the previous 50-plus years. Trio Mediaeval selected 14 pieces from England and France, transposing them for women's voices, and created a lady mass—a mass in honor of the Virgin Mary. Catalina Vicens provides a few of her own ear-catching interludes and improvised accompaniments on the portative organ. There's a lot of reverential medieval church music out there, but these selections are uniformly beautiful and top shelf. Two living composers contribute as well. Marianne Eriksen's "Sol Lucet" is compelling, with striking motifs that ring like people calling from mountain to mountain; ornaments and vocal effects shimmer like bird song and remind me of Bulgarian women's choirs. The album ends with the hushed, reverential *Alleluia Amen* by Bang on a Can's David Lang. The sound is glorious. **SE**

**Further Listening:** *An English Ladymass* (Anonymous 4/Harmonia Mundi)

*Music is like food and drink; you need it daily and it should be quality.*

# Q&A

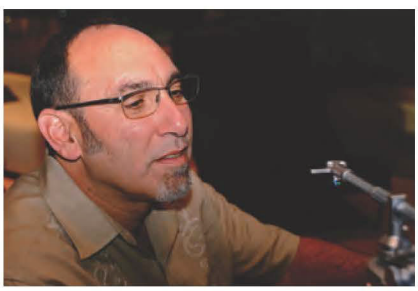
## Garth Leerer

## Musical Surroundings

Neil Gader

**What ignited your interest in the high end? Did it come from the music side or the electronics side?**

It's a combination. When I was growing up in the early 1960s, my family listened to LPs (folk music, classical, and comedy) on a Telefunken console. I played accordion as a young child, ranging from Liszt to Maurice Jarre, then started buying rock LPs, going to concerts, reading the stereo magazines at our public library, and getting product literature mailed to my house. My fascination with the role of electronics and the recording studio in making music grew. I earned both a BA and a Masters in Electronic Music while selling PA gear to bands, working in recording studios, running a mobile disco company, and installing discos.



**What gear made up your first high-end system?**

Thorens TD160, Soundcraftsmen 2217 pre/eq, modified 800Hz Altec Voice of the Theatre speakers (doubling as my onstage rig when living in San Francisco and playing analog synthesizers in bands). The Altecs were bi-amped with a Dyna ST70 and an Ampzilla, then replaced with Quad ESLs in a "mini HQD" setup for my living room.

**How did Musical Surroundings (*Leerer's distribution company*) come about? Did you have any mentors thatyou relied on or inspired you along the way?**

Because I loved vinyl, in 1991 I started promoting turntables and analog in the growing digital world. Nobody would take my wager that the LP would outlive the CD. Beginning in 1979, I spent 12 years working in high-end audio for manufacturers and stores. Noel Lee of Monster inspired me when I worked as a rep for him and walked the halls of CES wiring exhibitor systems with Monster Cables. Steve McCormack of The Mod Squad taught me more about setup and how to run a business when I ran his retail store Music by The Sea. David Fletcher inspired me regarding analog product development and manufacturing when we worked together at SOTA.

**What does the term "high-end" audio mean to you? Has the meaning changed for you over the years?**

High end means purpose-built components designed with one goal: to make better sound. It is not about price but performance, providing the listener with more musical insight and enjoyment. It implies an artisanal quality in both the company and its products—not a large corporation or a commodity. Today, it means audiophile-grade parts, sophisticated materials, a higher level of vibration control, and CNC machining.

**What do you look for, and what elements need to fall in place prior to taking on a new line of components to represent?**

Working with a visionary designer, products that address the needs of the market, and a realistic business sense—a manufacturer who wants to work together developing the right products for the market. We have been an incubator company for over 30 years, helping establish new brands and gear.

**Musical Surroundings has evolved over the years into almost exclusively analog product lines. Was this your plan?**

This was more of a passion, not a plan. In 2016, we became exclusively analog, which was our initial focus way back in 1991. It became a reality by adding Hana to our portfolio, joining our long-term relationships with Clearaudio and the groundbreaking DS Audio optical cartridges. Today, we enjoy greater success due to the continuing renaissance of vinyl, combined with our industry's growth during the pandemic and the evolution of our brands. One example is the Hana Umami Red, which was developed in 2020 in conjunction with Musical Surroundings.

**What are the greatest challenges confronting the high-end business in the next few years.**

From a commercial perspective, the changes in distribution channels with traditional retail, online sales, and direct-to-consumer. Reduced opportunities to audition gear can give rise to products designed with features that "read well" but do not measure up for performance and value. Brick-and-mortar retailers are responding by providing more listening experiences backed up with expert product installation and teaching people to listen and be more experiential about music. This means embracing both analog and digital for growing a new audience. The positive of the online digital age is that music access is better than ever. Live concerts have come back post-pandemic. All this creates a greater interest in music, and we must focus on those who crave this heightened experience. Music is like food and drink; you need it daily and it should be quality. I coined the phrase the turntable is the "barbeque of music." It is about being involved in the process and the experience. The new generation of vinyl listeners have embraced this classic technology that involves participation and involvement.

**Outside of audio, what do you do for fun?**

Wine collecting, food and entertaining, art, travel, attending live music. Like music and audio, all these are both sensory and intellectual endeavors. Nobody just wants to read about wine; they want to taste it, savor it, understand it, and match it to their meal. tas

## NEW CLASSIC SERIES | HIGH-END SOUND FOR HOME

For almost 50 years, the Naim Classic Series has been the byword for class-leading audio components that seamlessly combine to create a unique music system. Now, take your musical experience to the next level with 300 Series. Designed and developed in England, the range includes the feature packed NSS 333, a high-resolution streaming solution, NAC 332 preamplifier and NAP 350 amplifier, the phono preamplifier NVC TT and its dedicated power supply NVC TT. Sophisticated, simple to use, these timeless products will bring you years of listening pleasure.

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# “born to reduce noise”

In this realm, spousal approval is a factor of continuing significance, so these are acrylic cubes, roughly 2 inches on a side, and with a gently grooved top; at a distance, they look like crystal, making them less disruptive to décor. To the uneducated, they look like uppity cigar holders. Bottom line: [the] **JEWEL CableLifter** from Audience AV were born to reduce noise, both from connections and from significant others.

*Newstips*, September, 2020

audience

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